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BACTERIOLOGICAL NEWS

Society of American Bacteriologists

OFFICE OF THE SECRETARY

DEPARTMENT OF BACTERIOLOGY
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FROM THE SECRETARY'S OFFICE

Traditionally the April issue of *Bacteriological News* carries reports that show how the Society fared in its operations during the preceding year. In this issue you will find the reports of the editors of our journals, the financial report prepared by the Treasurer, and a special message from last year's President, Perry W. Wilson. Your Secretary also would like to record some of his observations after a full year in office.

Like anyone else on first introduction to the Society's operations, I was surprised at the scope and complexity of our affairs. I was no less surprised to discover the amount of time required to operate the Secretary's office and the generous contributions of time and effort from the editors of our journals and other officers and committees of the Society. It didn't take long, however, to discover some of the problems facing us.

As should be well known by this time, our major problem is financial. This condition is brought about by the failure of our income to increase as rapidly as costs have gone up. This statement may seem strange in view of the fact that the Society has no paid employees and purchases very little goods and materials. But we do purchase services; and their costs have risen steadily over the past several years.

As soon as I understood the nature of our problems I reached the personal conclusion that their solution—naturally they are soluble—will depend on the full and complete support of the membership. I further concluded that you—the members—will support any reasonable solution if you completely understand what must be done. Therefore, in the August, 1957, issue of *Bacteriological News* I attempted to explain some of the difficulties facing us. The current attempt might be considered a second chapter of that message.

As I see it, our Society has three major functions; (1) production of our journals; (2) our Annual Meeting; and (3) the many miscellaneous Society operations including several publishing ventures, the activities of our officers and committees, the Business Office, and others. Let's consider each of these separately.

Journals. For many years the Society has paid the publisher of the *Journal of Bacteriology* and *Bacteriological Reviews* the sum of $8.00 per member to cover the cost of each member's subscriptions to these publications. In addition, we have several thousand nonmember subscribers, chiefly libraries, who pay $14.00 per year. For several years prior to 1955 the income from subscriptions just about paid the costs of printing and publishing, leaving an amount approximately equal to the income from advertising to be divided in accordance with our publishing agreement.

Since 1955, however, this picture has deteriorated. Income from subscriptions and advertising has changed little if any, but costs have continued to rise. At the beginning of 1957 the cost of printing increased over 10 per cent and in November a second 15 per cent increase was instituted. These plus smaller increases in other costs have brought the cost of producing our journals currently very near their *total* income. If we paid for all editorial services, as many other societies do, we'd doubtless already be operating at a deficit. We must do something very soon if our journals are to remain solvent.

Possible solutions to this problem have been discussed before. First, what can we do to increase income? Current estimates indicate that *J.B.* and *B.R.* cost about $12.00 per subscriber. But many of the costs are fixed regardless of the number of subscribers. Therefore more members in the Society would increase income without increasing costs proportionally. Efforts to find new members have thus far not been noticeably successful. Additional advertising space sales is another possibility but conversations with our publisher have indicated this source has little added potential.

Can we then reduce expenses? The major costs of publishing our journals are (1) printing, (2) postage, (3) editorial work, and (4) overhead costs of the publisher. A survey of other printers was made recently and the results indicate that we could save little if any money by changing printers. We have nothing to say about postal rates and our editorial expenses already are minimal. In fact, if we paid for all the services furnished without charge by our editors and their employers these costs would be far higher than they are now. The last major item, overhead costs, cannot be reduced significantly. This charge reimburses the publisher for the many necessary services incident to publication of the journals.

It would appear, therefore, that the only way significantly to reduce the costs of publication without sacrificing quality would be to reduce the number of pages printed. Many subscribers, particularly authors, think there are too few even now.

What, then, can we do? It would appear the time is approaching when the costs of subscriptions will have to be increased unless we can enroll a much greater *number* of subscribers.

Annual Meeting. Our Society has always followed the policy of meeting at the invitation of one of its local branches. Without question this system has many desirable features. It enables us to move about the country and gives many more people the opportunity to attend at least some of the meetings.

Members who have not served on a local committee for the Annual Meeting are not likely to realize all the work that is necessary and all the

costs that are involved. The local committee has two major sources of income: (1) registration fees, and (2) rental of exhibit space. Expenses of the local committee are many, including costs of the smoker, tours, projectors and operators, registration personnel, special meals for the Council, the Editorial Board, the Presidents and Secretaries of Local Branches, preparation of reports, and many others.

One expense of the Annual Meeting that is often overlooked, however, is that of the Program Committee. If one accepts the premise that the Annual Meeting would not take place without the Program Committee (and vice versa), then he can justify charging the expenses of this committee against the Annual Meeting. The major expenses of the Program Committee include travel to arrange the program and the costs of printing the program and *Bacteriological Proceedings*. These charges usually aggregate upwards of $7,000. Our opportunity to meet all these charges and to have a self-supporting Annual Meeting are best when we meet in those cities that attract a large attendance. When we meet in places that attract small numbers, the income of the local committee is reduced and the deficit, if any, must be met from the Society's treasury.

General Operations of the Society. This category includes all activities not mentioned above. Support for these activities comes largely from the portion of the dues remaining after the members' subscriptions are paid for. The major expenses are publication of *Bacteriological News* (currently about 80 cents per member), the Business Management Service (currently $1.25 per member), travel and miscellaneous expenses of the officers and committees, and the costs of operating the Secretary's office.

From the above remarks it should be clear that our main immediate problem is financing our publications. But in the near future we must face up to the situation described by ex-president Perry W. Wilson in his message on the State of the Society. We cannot forever operate with part-time volunteers. Our Society needs and deserves the attention of a full-time executive to look after our affairs. Furthermore we cannot forever depend on the generosity of the employers of our editors and other loyal members to provide free office space, time and other forms of subsidy. We can afford to pay our own way and we must make plans to do it

SOCIETY AFFAIRS

FURTHER INFORMATION ABOUT CHICAGO MEETING

Special Events

On Monday, April 28, the Presidents and Secretaries of local branches will meet in Suite 440 from 5 to 8 PM for their annual business and social meeting. Cocktails will be served from 5 to 5:45 PM, after which a buffet dinner will be served.

The Local Committee is sponsoring a luncheon for the exhibitors in Suite 440 at 12:15 PM on Monday, April 28. This meeting is a combination luncheon and gripe session at which time the exhibitors will express themselves regarding their likes and dislikes as far as the meeting is concerned.

Graduate Student Mixer

The Local Committee is sponsoring a Graduate Student Mixer to be held in the Exhibit Hall on the third floor from 5 to 8 PM on April 28. Music for dancing during this period will be supplied by Dick Sarlo and his orchestra. Refreshments will be served. The party will be open only to graduate students and admittance will be by registration badge.

Special Tours

The Chicago Gray Line, Inc., will have a desk in the registration area on Sunday, April 27, for the purpose of selling Chicago Sightseeing tours to interested members. Two tours are planned for Sunday afternoon, each occupying a two hour period. One tour will be called "The North Lake Shore Drive Tour", and will provide a complete visit through Chicago's famous "Loop" and a drive through Chicago's beautiful north side parks and residential sections. You will see Chicago's famed "Gold Coast", beautiful Lincoln Park, the Elks National War Memorial, and several other famous sights. The second tour scheduled for Sunday afternoon will be called "The South Lake Shore Drive Tour". This tour also covers the famous "Loop" district the Chicago's beautiful and historic south side. You will pass through the campus of the University of Chicago, where you will see the birthplace of the atomic bomb. You will see famous Jackson Park as well as the Museum of Science and Industry. Both of the above mentioned tours will commence at 2 PM sharp and will take two hours for completion. The normal price is $2.75, including tax, but special arrangements have been made for members of our group to be charged only $2.20.

We have also arranged for a special tour entitled "Chicago by Night" to be conducted on Monday evening, April 28. This is a most unusual tour. It takes one down into the melting pot of a great city. You will see a new and different Chicago. You will visit China Town and see their City Hall. You will see Hull House, founded by Jane Adams, Bug House Square, The Mexican, Bohemian, and Spanish Sections, Little Italy and Little Russia. Many stops are included on this tour to give persons an opportunity to purchase souvenirs. The tour will leave the Morrison Hotel at 8 PM and takes about two and one-half hours. The cost of this tour will also be $2.20.

Abbott Laboratories is sponsoring a tour and complimentary luncheon on Tuesday, April 29. While there is no charge for this tour, tickets must be obtained twenty-four hours in advance so that Abbott Laboratories will know how many people to plan for. The Tours Committee has arranged for a trip to the famous Germ-Free Laboratories at Notre Dame University on Wednesday, April 30. The cost of the tour will be $4.00, to cover transportation expenses. Tickets must be purchased by Tuesday noon, April 29. Luncheon will be served through the courtesy of Dr. J. A. Reyniers and the University of Notre Dame.

Activities for the Ladies

Wives of visiting members are invited and encouraged to visit the Hospitality Room—Suite 505—which will be maintained throughout the duration of the convention. This suite will open after lunch on Sunday, April 27. Visiting wives with nothing to do on Sunday afternoon are urged to visit the suite and become acquainted with fellow guests.

A getting acquainted "Coffee and" will be held in the Hospitality Suite for the ladies at 10:00 o'clock on Monday, April 28. At this time the ladies will be advised as to the extent of the program which has been arranged for their entertainment during the period of the convention. A tour through the Merchandise Mart, and a visit to Don McNeil's Radio Show are two of the highlights which have already been arranged. Suite 505 is the visiting wives headquarters—use it whenever you wish. Local hostesses will do all in their power to make your visit to Chicago a happy and memorable one.

Special Meals

A complete announcement of special meals will be included in the registration packet which you will receive at the time of registration. This packet will also contain other pertinent and interesting material regarding various aspects of the convention.

Athletic Events

Those of you who are baseball fans will be interested in the baseball program available during the period of the convention. The Chicago White Sox play the Kansas City Athletics on Saturday and Sunday, April 26 and 27, at Comisky Park, 35th and Shields, on Chicago's south side. Monday, April 28th is an open date. The Chicago Cubs play the world-champion Milwaukee Braves on Tuesday and Wednesday, April 29 and 30, and on Thursday, May 1. These games will be played at Wrigley Field, Sheffield and Addison, on Chicago's near north side.

Time Change

Metropolitan Chicago advances its collective clocks one hour at midnight on Saturday, April 26, thus embarking upon a six-month's period of Central Daylight Saving Time. It will be necessary, therefore, for all persons attending the convention to keep this time change in mind, since all sessions will be operated on Central Daylight Saving Time.

Watch the Incubator

Since this convention will be no different than any other one in that many last minute changes take place, the Local Committee has decided to publish the INCUBATOR each day starting on Sunday morning, April 27. A complete listing of late changes in meals, program, meeting places, etc. will be included in the INCUBATOR each and every day.

EMPLOYMENT BUREAU

Dr. Milton J. Foter, Director of the Employment Bureau, will maintain headquarters in Room 427, 429, and 432 on the fourth floor of the Morrison Hotel. Office hours will be from 9:00 to 12:00 A.M. and from 1:30 to 4:30 P.M., April 28 to May 1, 1958.

Persons interested in new employment should register at the Employment Bureau upon arrival in order to receive information about available positions and interview scheduling. This applies to bacteriologists already registered with the Bureau and others who are interested in being interviewed by prospective employers.

Employers attending the convention who desire to interview candidates for their staff vacancies are invited to inspect the personal data of Bureau registrants and arrange for interviews at the headquarters of the Employment Bureau or at other places of mutual convenience. Blackboards will be available for posting messages relative to interviews and registrants and employers are requested to check the message listing periodically so that interviews can be arranged promptly.

A mechanism has been devised so that employers

can register and announce staff vacancies and interview registrants who are interested in their specific positions. Fellowships, assistantships, and grants can also be listed by academic institutions for the benefit of individuals interested in advanced training or academic research. Since there is no financial obligation involved, it is hoped that all employers will avail themselves of this service.

ANALYTICAL GROUP MEETINGS

The Analytical Microbiology group has planned the following activities for the 1958 meeting in Chicago.

Round-table Discussions

1. Revisions in B Vitamin Assay Methods by the Association of Official Agricultural Chemists—H. W. Loy, L. Stubberfield, W. Cort, and P. Derse; Convener: R. Gauthier
2. Assay of Antibiotics in Combination—R. Kersey and A. Kirschbaum; Convener: E. C. Saudek

Panel Discussion

Panel Discussion on Phenolics as Antimicrobial Agents—P. A. Wolf, P. Klens, M. Pelczar, L. F. Ortenzio; Convener: W. C. Alegnani

A dinner and business meeting also will be held. Watch the bulletin board for announcements.

THE STATE OF THE SOCIETY

A few years ago a committee of the Society (probably the perennial *ad hoc* Committee on the Annual Meeting) suggested that the presidential address at the annual meeting should not deal with the "State of the Society" but this message might appropriately be delivered by the past president at the business meeting. The assumption was that after a year in office a president acquired a perspective he did not have at the beginning of his term. Although the Council approved the recommendation in principle, no formal action was taken to implement it. If I judge correctly the present temper of the Council, it would take a very dim view of any suggestion that would add to the program of the annual meeting, including the business meeting. However, this almost forgotten proposal might be accomplished by a farewell message in *Bacteriological News* from the past president. Indeed, Dr. Walter Nungester furnished such a precedent at the end of his term (*News-Letter*, Jan. 1952). I am sure all presidents regard the year of their tenure as one of decision for the Society—I propose to discuss briefly a few events that I regard as being particularly decisive.

I. The first of these was the Society's approval to participate actively in the forthcoming VIIth International Congress for Microbiology, not only by appointment of official delegates, honorary Congress board members and the like, but more important by aiding participants to attend through a travel fund to which the members themselves contributed. It is not necessary for me to comment on the desirability of this action if we wish to encourage participation by our members. The proverb "Bread cast upon the waters . . ." applies here as well as elsewhere as has been discussed in detail by Dr. Louis Levin of the National Science Foundation in this issue.

II. At the Detroit meeting the Council voted to become an *Affiliate* of the *American Institute of Biological Sciences*. This action was highly encouraging to members of other biological groups as demonstrating our willingness to cooperate with their organizations in those areas in which we have community interests. An example of such cooperation has been the recent protest to the Civil Service Commission and others regarding the action that increased salaries of physical scientists in the service but not those of biologists. The prompt action of the A.I.B.S. in mobilizing biological organizations to present immediate objections to this order will, I am certain, be much more effective than unorganized action taken by any one group. The A.I.B.S. also served as the operating agency in the administration of the travel fund; all of us who were concerned with this can testify regarding the great help they provided.

III. The Society was one of the few (and perhaps the only) American biological organizations that participated formally in the I.G.Y. Two members have gone to the polar region for bacteriological observations. Dr. Richard H. McBee reported on his reconnaissance trip at Detroit, and Dr. John M. Sieburth, who is now stationed on an Argentine ice-breaker, expects to return in time to report at Chicago. Although falling short of what was originally planned, the I.G.Y. committee (R. H. McBee, F. D. Sisler, C. E. Zobell, Chairman) is to be congratulated for making progress after a late start and in face of many discouraging obstacles.

IV. After several years of hard work requiring the efforts of many of our members, the formation of a professional organization, the American Academy of Microbiology, was completed during 1957. At the Detroit meeting the S.A.B. *Committee of Twenty* gave its final report to the Society and was discharged with the thanks of the Council and the officers for their outstanding service.

V. Because of its implications for the future development of the Society, perhaps the most significant event of the past year was the favorable outcome of our appeal in the income tax case (See summary in *Bacteriological News*, August, 1957). This case has acted more or less as a straightjacket on past administrations, delaying action on matters that a Society as large as our own must seriously consider. Chief among these is the necessity for the establishment of a Central headquarters where

professional personnel will be employed by the Society to carry on many of its housekeeping activities that today are either obtained through the generosity of individuals and institutions or are hired from our publishers. Since the establishment of a Central office will undoubtedly mean some increase in dues, a circumstance that is unlikely to be popular with the members, I shall close this last official communication with a brief discussion of why this appears desirable.

The decision of the U. S. Treasury Department states:

> "Careful consideration has been given to all the information submitted and it is our opinion based upon the facts as set forth above that while some of your activities and operations are of an educational and scientific nature you are not the public type of organization contemplated by section 501(c)(3) inasmuch as you are an association of individuals in a particular profession and your activities and operations are directed for the most part, toward the betterment and improvement of the profession and the business interests of your members rather than the general public."

More bluntly stated by our counsel this means:

> "The Society had asked to be classified as a scientific organization and to be entitled to tax exemption thereby afforded. The Department of Internal Revenue denied the classification requested but did classify your society as a 'business league'. . . . This raises a reasonable inference that if the Treasury had concluded that your operations were primarily for the benefit of the general public you would have been classified as a scientific organization, but as your activities are primarily for the benefit of the members of your Society you are entitled to no greater exemptions than a business league (*e.g.*, Chambers of Commerce, Real Estate Boards and other organizations which are not organized for profit)."

Foremost among these benefits associated with Society membership is the reduction in the price of the journals—a reduction that means the members obtain the *Journal of Bacteriology* and *Bacteriological Reviews* for considerably less than the cost of production. Although rising costs of publication (see report of the Secretary in this issue) probably will necessitate an increase in these charges in the future, they still undoubtedly will be considerably less than those paid by nonmembers.

The favorable position of the Society's members has a simple explanation—a substantial part of the costs are borne by individuals and institutions so that these never appear on the balance sheet. This is customary practice in the operation of scientific societies, and as long as the services required without recompense are "reasonable", the individuals and institutions accept them as part of their professional responsibility. But what is reasonable? Obviously at some point, the size of the group reaches a figure where services previously rendered without charge must be paid for. The Society has had to face this penalty of growth in the past, and the end is not yet in sight. Because the duties required of such officers as the Secretary, Treasurer and the Editors of the journals increase with increasing membership, it is becoming more and more difficult to find men and institutions willing to serve "for free". No one wishes us to reach a point where these offices will go by default only to those individuals or institutions that are still willing to provide free loading for the Society. At all times we must keep these policy and operating agencies in the hands of those best qualified, not those that can bring the most attractive dowry.

With these considerations in mind the Council Policy Committee at the Detroit meeting set up an *ad hoc* Committee on Future Plans of the Society, and directed it to bring in necessary information that would allow the formulation of both immediate and future policy for operation of the Society. The immediate problem is the negotiation of a new publishing contract, without the objectionable features of the one under which we have operated in the past. For this reason members of the committee are mainly those whose duties in the past have been concerned with publication (Roger Porter, Chairman). As soon as this objective has been disposed of, the financial structure of the Society will be examined to determine if and when a Central office with paid employees can be established to take over most of the routine duties of the officers of the Society and the Editors of its journals. It is anticipated that in the future other operations of the Society may be housed in this central headquarters. How many years it will take to consumate the long term plan cannot yet be estimated but certainly it is not too early to begin discussion and planning for its eventual realization.

PERRY W. WILSON

JOURNAL OF BACTERIOLOGY

Annual Report 1957

Four members of the Editorial Board (R. E. Hungate, L. S. McClung, D. J. O'Kane and R. W. Stone) completed their term in 1957. The Editor wishes to thank these members for their great service to the *Journal* and the Society.

The quota of pages allocated to the Journal for 1957 was increased by 300 pages to help take care of the backlog of manuscripts. The extra pages and the receipt of fewer manuscripts have relieved the situation. However, it has also meant that the *Journal* has been operated on a very slim financial profit.

The accompanying tabulation shows the disposition of manuscripts and other data on papers published during the past two years. Although fewer new manuscripts were received in the editorial office during 1957, many were unusually long and involved. Several manuscripts were returned to authors for modification. Unfortunately we have been unable to work out some problems with authors. It is hoped that our backlog can be further reduced during the next year, but it appears that authors will have to expect a six to seven months delay in publication.

	1956	*1957*
Number of manuscripts under consideration January 1	43	25
Number of manuscripts received during year	390	375
Number of manuscripts accepted during year	277*	264†
Number of manuscripts returned to authors for correction or modification	174	118
Number of manuscripts rejected during year	104‡	95§
Number of articles published during year	293	298
Number of Illustrations:		
Tables	681	710
Linecuts	480	458
Halftones	159	169
Number of manuscripts accepted and awaiting publication	115	89**
Number of manuscripts under consideration December 31	52¶	50‖

* Includes 36 originally submitted in 1955

† Includes 30 originally submitted in 1956

‡ Includes 7 originally submitted in 1955; 5 withdrawn by authors; 11 transferred to other journals.

§ Includes 4 originally submitted in 1956; 3 withdrawn by authors; 2 transferred to other journals.

¶ Comprises 27 mss. in hands of reviewers; 18 in hands of authors for modification; 7 in editorial office.

‖ Comprises 21 in hands of reviewers; 25 in hands of authors for modification; 4 in editorial office.

** This figure does not include the December 1957 issue which was ready for mailing.

The tabulation below shows the allocations and expenditures in the Editorial Office for the past two years. Expenses will be more next year, especially if a new bill increasing postage should be passed.

INCOME:	*1956*	*1957*
Balance on hand January 1	$429.38	$605.93
Received from Williams and Wilkins Company	4000.00	4500.00
Total	$4429.38	$5105.93
EXPENDITURES:		
Editorial Assistant and Social Security	$3146.52	$3489.84
Postage, binding of journals, office supplies, etc.	676.93	680.68
Total	$3823.45	$4170.52
Balance on hand December 31	$605.93	$935.41

J. R. PORTER
Editor

BACTERIOLOGICAL REVIEWS

Annual Report 1957

It seems appropriate to devote this final report under my editorship to a summary of the entire 6 years rather than the immediate past one. Quantitatively, during this period, 83 separate articles have been published classified as:

General Bacteriology	19
Physiological Bacteriology	20
Medical Bacteriology	13
Applied Bacteriology	6
Others	
Presidential addresses	6
Eli Lilly Award addresses	5
Symposia	5
Summaries of symposia	4
Miscellaneous	5

A few comments on this classification: obviously, the first four categories correspond to the four Divisions of the Society, and, perhaps equally obviously, some disagreement might be expected regarding the precise designation of a given review. Actually, the choice has not been too difficult except for a few articles that might have been placed with equal cogency in either the *General* or *Physiological* groups. The fact that these two categories dominate the number of reviews published probably reflects not only the bias of the editor but also current research interest in these two fields. Undoubtedly an editor's bias plays some role in the reviews he solicits but not too much in others submitted for consideration nor in the subject matter of symposia and Eli Lilly Award addresses. If this point of view (that reviews submitted measure interest in the field) is valid, maybe the current notion that few bacteriologists are interested in taxonomy is not entirely true. The number of workers may be small, but they are prolific writers judging by the fact that 9 of the 19 reviews published in *General Bacteriology* dealt with taxonomical subjects.

The reviews placed in the *Medical* group include those dealing with pathogenic organisms for both man and animal, together with those concerned with serology and immunology. In applied fields other than these, the number of reviews published

has been disappointingly low; even more disconcerting is the fact that all those published came in the first 3 years of my editorship. Perhaps one way in which the officers of the Agricultural and Industrial Division can stimulate interest in this division is to aid the new editor in securing suitable reviews in the fields represented by its membership.

The *Miscellaneous* group includes: the obituary of Dr. Barnett Cohen, the historical study of presidential addresses by Dr. Paul Clark, two articles on statistics in microbiology and the supplement on immunization against poliomyelitis published under the auspices of the National Foundation for Infantile Paralysis. Certainly this latter might have been placed in the *Medical* category and the others in the *General*.

The solution of the problem of how the Society should handle the symposia given at the Annual meetings must be left to my successor, Dr. Henry Scherp. With the present allocation of pages it is not possible to publish all unless we publish few reviews and many symposia. Two schemes were tried during the past 6 years, but neither was outstandingly successful. The first was to publish in a limited version certain selected symposia. This was abandoned because only one or two could be published each year, and this editor did not care to assume the responsibility of deciding which were to be given access to the pages. Therefore, after a trial run in 1954, summaries of all the symposia have been published for the past 3 years. This attempt at a solution, however, has not been judged as satisfactory, and the problem is once more receiving the consideration of the Publication Board.

I should be most ungrateful if I did not use this opportunity to thank publicly the many Society members who have made my period of editorship a most worthwhile and stimulating experience. First, to the more than 100 authors who wrote the reviews: the six volumes were made possible by your contributions and my life pleasant by your cooperation and willingness to revise manuscripts in the light of the comments of both editors and referees. Second, to the members of my editorial board and to the many conveners of the symposia who acted as editors for these articles: your labors in obtaining and screening the reviews, and at times even editing, greatly reduced the editorial load that I might otherwise have had to carry. And finally, thanks to the numerous anonymous helpers who constantly helped us through solicitation of possible reviews or by acting as "outside readers" of submitted manuscripts. I commend to the new editor this reservoir of talent within the Society who, even without the satisfaction of seeing their names on the masthead, willingly give their time in helping make this publication one that reflects credit on the Society and its members.

INCOME:	
Balance December 31, 1956	$100.00
Received from Williams and Wilkins Office	500.00
Editorial assistant	800.00
	$1400.00
EXPENDITURES:	
Travel to official meetings	86.66
Personnel (typing, checking mss.)	78.00
Supplies (stamps, phone, general)	187.86
Capital	100.00
Editorial assistant	800.00
	$1252.52
Balance on hand December 31, 1957	$147.48

PERRY W. WILSON
Editor

APPLIED MICROBIOLOGY

Annual Report 1957

In 1957, Volume 5 of *Applied Microbiology* was published. As in former years, the reports of research on the applied aspect of microbiology covered a wide range of topics. In addition, reviews of subjects of broad interest were published as Microbiological Process Reports or Microbiological Process Discussions. A classification of papers published by subject matter is given below.

Subject	*Papers Published in 1957*
Methods and techniques	14
Microbiology of food products	14
Microbial physiology related to applied processes	10
Fermentation and bioengineering	9
Antibiotics	8
Microbiology of water and sanitation processes	8
Effects of physical factors	4
Germicides and disinfectants	3
Culture identification and preservation	3
Microbiology of industrial products (nonfermentation)	2
Rumen microbiology	2
Soil microbiology	2
Deterioration and preservation	1
Bacteriophage	1
Medical bacteriological techniques	1

Through our system of rotation, five of the members of the Editorial Board retired from service on *Applied Microbiology* with the completion of Volume 5. These are Dr. T. C. Cordon, Dr. J. W. Foster, Dr. C. E. Georgi, Dr. Gladys L. Hobby and Dr. F. A. Weiss. One member, Mr. H. W. Schoenlein, was lost to the Board due to death.

All have been of great help to the editor in evaluating manuscripts and have spent much time in making specific suggestions for improvements in some manuscripts. In addition, the members of the editor's staff, Dr. B. M. Miller, Mrs. Mary Ann Reagan, and Miss Matilda Heisch, have contributed greatly to the quality of the journal.

In selecting members of the Editorial Board for the 1958–1960 term, the Society has been guided by its policy of equal representation on the Board covering university, government or institution, and commercial laboratories. Selections have been made to give representation to the more common fields of microbiological interest, as determined by papers submitted for publication in *Applied Microbiology*. The Editorial Board members appointed are Dr. R. E. Bennett, Dr. P. C. Eisman, Dr. H. H. Hall, Dr. M. W. Jennison, Dr. C. F. Niven, Jr., and Dr. J. M. Van Lanen for the 1958–1960 term and Dr. J. H. Brewer to fill the unexpired term of Mr. H. W. Schoenlein.

The following tabulation shows the number of papers received prior to December 31, 1957, their disposition and a comparison with similar data for 1956.

	1956	*1957*
Number of manuscripts received for publication during year	107	116
Number of manuscripts accepted	88	79
Number of manuscripts rejected	16	22
Number of manuscripts under consideration	3	15
Number of manuscripts returned to authors for correction or modification	11	28
Number of papers published	74	82
Backlog of accepted papers awaiting publication on December 31	42	47
Pages printed	373	423

The following tabulation shows the expenditures of the editorial office during 1957.

INCOME:		
Balance on hand January 1, 1957	$480.00	
Received from Williams & Wilkins	500.00	
Total		$980.00
EXPENDITURES:		
Secretarial and editorial assistants	65.00	
Postage, office supplies, etc.	121.35	
Travel to official meetings	43.65	
Total		230.00
Balance on hand December 31, 1957		750.00

H. B. WOODRUFF
Editor

REPORT OF THE TREASURER

For the third consecutive year the Society operated within its income from dues, thus allowing its income from investments and publications to be allocated to the National Headquarters Fund. Total income in 1957 was $160,320.57 and disbursements were $141,311.02 resulting in an increase in cash at the end of the year of $19,009.55. The invested capital (National Headquarters Fund) was increased to $98,088.02 (cost basis). The Cash Statement and Balance Sheet for 1957 appears on pages 10–11.

The 1957 income includes $28,031.26 of "nonrecurring" income derived from redemption of $6000 worth of Series F Savings Bonds and refund of income tax payments of $20,281.56 and interest on these payments of $1,923.70. Income from dues paid in 1957 amounted to $79,963.75 of which over 50% was for future dues. In 1956, 41% of the dues received was for future years. The Society publications accounted for $9346.37 of the total income, about $5,000 less than in 1956. This decrease was due to increased cost of printing and the publishing of only eleven issues of the Journal and three of Reviews during the year.

Disbursements during 1957 amounted to $141,311.02, almost twice the amount spent in the previous year. Monetary awards were an important segment of the disbursements. The Sub-Committee on the Taxonomy of the Actinomycetes made grants for research in this field to the University of Michigan, Dr. Ruth Gordon, University of North Carolina, Syracuse University and Ohio Wesleyan, totalling $14,955 from funds contributed for this purpose. A balance of over $15,000 remained in these funds on December 31, 1957. The Society contributed $3,000 to the American Type Culture Collection to aid it in publishing a new catalog. Eleven Presidents Fellowships totalling $2,565.30 were awarded during the year. The annual Eli Lilly Award of $1,000 brought the total monetary grants made during 1957 to $21,530.30.

The largest single expenditure, aside from the Journal and Bacteriological Reviews for members, was for investments, made possible by the tax refund, investment income and the maturing of six Series F Savings Bonds. At the beginning of the year $9200, representing the maturing bonds and investment income from 1956 was available. These funds were used to purchase $8900 worth of common stocks. The $22,000 tax refund was used to purchase $17,000 (maturity value) Government and utility company bonds, and $4900 worth of common stock. Schedule A lists the securities held by the Society on December 31, 1957.

JOHN HAYS BAILEY
Treasurer.

Society of American Bacteriologists
Cash Statement
Calendar Year 1957

Cash Balance, Jan. 1, 1957.		
Checking		$16,272.30
Savings Accounts		28,417.97
		$44,690.27
Receipts:		
Dues, 1957 New (318)	$3,815.50	
1957 Renewal (2799)	33,621.28	
1957 Sustaining, New (4)	300.00	
1957 Sustaining Renewal (9)	675.00	
1958 New (48)	577.30	
1958 Renewal (2976)	35,710.87	
1958 Sustaining, New (1)	75.00	
1958 Sustaining Renewal (58)	4,350.00	
1958 Emeritus (2)	16.00	
Back Dues (1953–1956)	706.50	
Future Dues (1959–1960)	65.00	
Dues for Refund (credit)	51.30	79,963.75
Society Publications		
Bacteriological Proceedings	182.64	
Journal and Reviews	7,375.50	
Biotech Publications	1,421.03	
Alice in Virusland	12.50	
Directory	89.00	
Careers in Bacteriology	265.70	9,346.37
Interest and Dividend Income		
Interest, Savings Accounts	1,248.11	
Interest, Series F Bonds	174.00	
Interest 2½% U. S. Treasury Bonds	950.00	
Dividends, Common Stocks	1,917.78	4,289.89
Annual Meeting		
1956	263.01	
1957	7,427.88	
1957 Proceedings Advertizing	2,310.00	10,000.89
Award Grants		
Taxonomy of Actinomycetes	23,000.00	
Presidents Fellowships	5,186.00	28,186.00
Income Tax Refund*		22,205.26
Redemption Series F Bonds		5,826.00
Miscellaneous Income		
Mailing List Sales	379.52	
1958 Assessments (27)	13.50	
Applied Microbiology, Dr.	91.75	
Sundry receipts	17.64	502.41
Total Receipts 1957		160,320.57
Brought Forward		$160,320.57
Disbursements		
Officer's Expenses		
Secretary's	2,577.00	
Treasurer's	178.55	
Other officer's	65.50	2,821.05
Committee Expenses		
Taxonomy of Actinomycetes	168.13	
Committee of 20	64.50	232.63
Journal and Reviews		
1955 issues	8.00	
1956 issues	328.00	
1957 issues	25,040.00	
1958 issues	24,664.00	
1959 issues	40.00	50,080.00
Society Publications		
Bacteriological News	3,220.95	
Careers in Bacteriology	686.06	
Directory and Constitution	4,252.78	
Biotech Publications	351.37	
Alice in Virusland	4.02	8,615.18
Managerial Service		6,736.80
1957 Meeting		10,286.12
1958 Meeting		921.90
Applied Microbiology, Cr.	91.75	
Award Grants		
Presidents Fellowships. 2565.30		
Am. Type Culture Collection 3000.00		
Eli Lilly 1000.00		
Taxonomy 14955.00	21520.30	
Mail List Sales Cost	180.47	
Investment Costs	30743.89	
1956 Income Tax	5907.86	
Income Tax, legal fees	3042.78	
Dues Refund, Dr.	100.55	
Sundry Disbursements	29.74	
Total Disbursements, 1957		141,311.02
Increased cash for the year		19,009.55
Balance, Dec. 31, 1957		
Checking Account	27,166.46	
Savings Accounts	36,533.86	63,700.32

* Includes $1,923.70 interest on payments.

Society of American Bacteriologists
Balance Sheet
as of Dec. 31, 1957

Assets		
Cash: Checking	$27,166.46	
Savings	36,533.86	$63,700.32
U. S. Treasury Bonds (at cost)	45,727.50	
Corporate (Utility) Bonds (at cost)	7,325.57	53,053.07

Common Stocks (at cost)		43,035.22
Accrued Assets		
1959 Meeting paid in 1957	500.00	
1958 Meeting paid in 1957	921.00	1,421.90
1958 Subscriptions paid in 1956	16.00	
1958 Subscriptions paid in 1957	24,664.00	
1959 Subscriptions paid in 1957	40.00	24,720.00
		$187,930.51
Liabilities: Deferred		
1958 Dues paid in 1956	26.50	
1958 Dues paid in 1957	40,729.17	
1959 Dues paid in 1957	63.00	
1960 Dues paid in 1957	2.00	
1958 Assessments paid in 1957	13.50	40,834.17
Reserves		49,000.00
Surplus		
Invested capital (at cost)	98,088.29	
Unassigned Surplus	8.05	98,096.34
		$187,930.51

Schedule A

Bonds and Stocks Owned by Society of American Bacteriologists

Amount		*Cost*
$38,000	U. S. Treasury Bonds 2½% 1967–72	$36,117.84
5,000	U. S. Treasury Bonds 3% 1995	4,606.73
5,000	U. S. Treasury Bonds 3⅞ 1974	5,002.93
7,000	N. J. Bell Telephone Co. Bonds 4⅞ 1993	7,325.57
$55,000		$53,053.07
200 Shares	Standard Oil, N. J.	$10,245.63
100 "	General Motors	4,625.59
100 "	F. W. Woolworth and Co.	4,763.63
200 "	Public Service Electric and Gas Co.	6,173.22
80 "	Douglas Aircraft	7,020.73
50 "	Bendix Aviation	2,927.68
100 "	Sperry Rand Corp.	2,791.31
200 "	Niagara Mohawk Power Corp.	6,487.43
		$45,035.22

Schedule B

1957 Financial Statement
Journal of Bacteriology and Bacteriological Reviews

Embracing Vol. 72 (20), No. 6 (4), to Vol. 74 (21), No. 6 (4); i.e., 13 (5) Issues

Income		
Subscription Sales		$88,835.11
18 pages transferred from Reserve for Unpublished pages		634.86
394 unpublished pages from 1956 (JB 316; BR 78).		16,483.52
		105,953.49
Space Sales		24,943.51
Total Revenue		$130,897.00
Expenditures		
Printing Cost of Text		
1832 pages JB	$61,823.05	
386 pages BR	13,670.62	
2218	75,493.67	
Sustaining "M" page	183.36	
	75,310.31	
Printing Cost of Advertising Section	8,413.85	
Postage	6,080.44	
Mail List	1,778.17	
Editorial Costs	9,003.83	
Other Costs—Marketing	—	
Overhead Expense	17,567.00	
Total Expenses		118,153.60
Profit—Current Issues		12,743.40
Back Volume Sales		1,681.63
Net Surplus For Year		$14,425.03
50% to SAB		$7,212.52
50% to W & W Co.		7,212.51
Gross Operating Revenue from All Sources		$132,578.63

Paid Subscriptions

BR only	*Act.*	*Susp.*
Non-M	289	57
JB—BR	*Act.*	*Susp.*
M	5093	367
Non-M	3482	343
	8575	710

Schedule C

1957 Financial Statement
Journal: Applied Microbiology

Embracing Vol. 4, No. 6, to Vol. 5, No. 6; i.e., 7 Issues

Income		
Subscription Sales (6 issues)		$14,251.29
116 unpublished pages Volume 4, #6 transferred from 1956		3,919.50
		18,170.79
Space Sales (7 issues)		1,374.78
Total Revenue		$19,545.57
Expenditures		
Printing Cost of Text (514 pages, 7 issues)	$14,997.99	
Printing Cost of Advertising Section	513.71	
Postage	535.28	
Mail List	413.44	
Editorial Costs	1,184.75	
Other Costs—Marketing	26.89	
Overhead Expense	3,035.00	
Total Expenses		20,707.06
Loss—Current Issues		1,161.49
Back Volume Sales		738.77
Other Revenue or Expenses		
Cr. from Reprint Sales	2,622.43	
Mfg. Cost of Reprints	1,632.11	990.32
Net Surplus For Year		$567.60
50% to SAB		$283.80
50% to W & W Co.		283.80
Gross Operating Revenue from All Sources		$22,906.77

Paid Subscriptions

Active	*Susp.*
1962	138

NEWS AND ANNOUNCEMENTS

ABOUT THE INTERNATIONAL MICROBIOLOGY CONGRESS

At the time this is being written (February 7, 1958) plans for the Congress are progressing rapidly. Americans who applied for admission prior to the September 30, 1957, deadline (*Bacteriological News*, August, 1957) were accepted. This group plus the Americans invited to participate in the symposia, numbered almost 300, a sizable fraction of the 1000 total membership originally established.

As was detailed earlier, a good share of the program will be devoted to six symposia, for which the participants were invited by the Congress Program Committee. Out of a total of approximately 60 "active symposium participants" (moderators, speakers and panel members), almost half are Americans. Thus it is evident that the U. S. and our Society will be well represented.

Efforts to obtain funds to help support the travel of Americans to the Congress have been described in earlier issues of *Bacteriological News*. In addition to the grant from the National Science Foundation and the funds resulting from the special assessment approved by the membership in a referendum last fall, several sustaining members responded to a solicitation from the 1957 President Perry W. Wilson. Those contributing to the travel fund were Ivan Sorvall Co., International Equipment Company, Bellco Glass Company, New Brunswick Scientific Company, and Difco. In addition, Eli Lilly and Co. made a generous contribution to the Society to help send its official representatives to the Congress.

Also it should be mentioned that several of our sustaining members made contributions directly to the Congress Organizing Committee to help defray its many expenses in operating the Congress.

Bacteriological News is no place to debate the desirability of international congresses nor to consider our individual responsibility to see that our Country and our Society are adequately represented. The vote on the special assessment of fifty cents per member last fall clearly indicated that a sizeable number of our members feel no personal responsibility to see that we have representatives at international meetings. Nevertheless, events of the past few decades prove we have no choice but to participate in world affairs, be they political or scientific. Those who say "Let the Government do it" are reminded that public funds did, in fact, comprise the bulk of the money available to support travel to the Congress. We must remember, however, that many others are competing for the available funds. Federal granting agencies, faced with limited budgets to support travel to international meetings, naturally are more receptive to requests from groups who feel sufficiently interested and concerned to help themselves. The following article illustrates the problems of Federal Administrators in securing appropriations to help groups such as ours participate in international scientific interchange.

THE SUPPORT OF TRAVEL TO INTERNATIONAL MEETINGS*

There appears to be agreement among scientists that person-to-person discussion of scientific problems, theories, hypotheses and results is one of the best ways to stimulate further progress in research. To this end, scientists and their associations organize local, national and international congresses, conferences, symposia and colloquia. Various research supporting organizations have recognized the value of such meetings. Because defrayment of travel costs is difficult for the average scientist, particularly if travel to overseas countries is involved, a number of agencies and organizations attempt to subsidize such travel of as many worthy scientists as possible. This is done by differing mechanisms by the various agencies. The National Science Foundation, for example, subsidizes travel to congresses and symposia in foreign countries through an organized program in which recipients of travel support are selected from among applicants with the aid of the appropriate segment of American science. The amounts of money available to the National Science Foundation for support of international travel have always been small and at times, e.g., fiscal year 1956, the Congress refused to include any funds for this purpose in the Foundation's appropriation.

One reason for the lack of sufficient funds is that budgeting and appropriating bodies look upon subsidization of international travel with certain suspicion, even though its importance is repeatedly justified. One even hears terms like "boondoggle," "jaunt" and "junket" used in connection with such travel. Thus, to obtain reasonable sums for this purpose it becomes necessary to provide evidence of the intense interest of scientists and of indications that they and their organizations do, indeed, consider travel to international meetings a worthwhile and necessary enterprise. Perhaps the best such concrete evidence is the demonstration that the scientific group is so devoted to this purpose that it, itself, devises ways to raise money to support travel. And the strongest bit of such evidence

* The views expressed are those of the author and do not necessarily reflect the official policies of the National Science Foundation.

is the willingness of the membership of the group to contribute a small amount to the pool of funds which will be used to subsidize travel to its congress, conference or symposium. Such a contribution, even if only in token amount is a definite and incontrovertible demonstration of the importance that scientists place upon participation in international scientific meetings. It is not difficult to understand the impression such a demonstration has upon the donors (congressmen, budget officials, etc.,) who are asked to provide a much larger share of the money.

A number of scientific societies have now adopted the practice of taxing each member a small sum (usually one dollar) each year as part of the annual dues. This money is put aside into a separate account and is used to support the travel of selected persons to the congress or conference in which the group has interest. The selection is made according to whatever rules or guide lines the group wishes to impose upon itself. Most frequently, emphasis is placed on aiding the travel of promising young scientists who have not had opportunity for contact with foreign colleagues. But whatever the rules, it is impressive that the American Society of Biological Chemists, for example, has available its own fund of over $3,000 to support the travel of about five or six biochemists to each of the triennial Biochemical Congresses. To this have been added considerably larger sums of various agencies at the time of each of the last three congresses.

There is an old saw about God helping those who help themselves. Truly, help comes most abundantly to those groups which demonstrate their sincerity of belief in the worth of a cause by attempting to help themselves by action as well as words. In this matter, as in others, scientific groups may work and act toward their own interests as well as toward those of American science as a whole. Or they may, by their inaction, "pass the buck" to others. If they follow this latter course, they also must be prepared not to complain too vigorously if the treatment they receive is not entirely to their liking.

Louis Levin
Deputy Assistant Director for Biological and Medical Sciences, National Science Foundation

VAN HEYNINGEN IS O.N.R. LECTURER

In continuation of the practice started at the 1957 Annual Meeting, the Office of Naval Research is again bringing a prominent European microbiologist to the United States to participate in our 1958 Meeting. Dr. W. E. Van Heyningen of Oxford University, an authority on bacterial toxins, is our guest for 1958. He will speak at the Sunday night meeting, April 27, on "The Key to Lockjaw."

AMERICAN ACADEMY OF MICROBIOLOGY

Following is a statement concerning two of the activities of the American Academy of microbiology which should be of interest to all microbiologists.

1. Progress is being made towards certification of microbiologists. During the summer Chairman Baldwin appointed two committees to start a program leading to certification in the areas of Clinical Diagnostic Microbiology and Public Health Microbiology. Dr. David T. Smith is Chairman of the Committee on Clinical Diagnostic Microbiology. His committee members are: Dr. Lewis L. Coriell, Dr. Tom R. Hamilton, Dr. Thomas F. Paine and Dr. Harry M. Rose. Dr. Charles Croft is Chairman of the Committee on Public Health Microbiology. His committee members are: Dr. W. H. Ewing, Dr. William W. Ferguson, Dr. Albert V. Hardy and Dr. Norman C. Laffer.

These two Committee Chairmen reported to the Board of Governors at the meeting of November 26, 1957. They are continuing their studies and will make further reports. They have made sufficient progress, however, for the Board of Governors to consider specific action in these areas. A committee has now been appointed to develop a plan of organization of two Certifying Boards and to make recommendations to the Board of Governors on how the plan should be put into operation. Dr. William Cromartie is Chairman of this committee and the members are Dr. John H. Bailey, Dr. Charles C. Croft, Dr. David T. Smith, Dr. Earle H. Spaulding and Dr. J. T. Syverton.

Certification in other areas will be started as soon as there is a demand for such action.

2. Many microbiologists are disturbed over the discrepancy between the salaries of biologists and physical scientists in both federal and state services. Discrimination of this kind does not seem justifiable and the American Academy of Microbiology is working actively to correct all inequalities.

Dr. S. R. Damon is Chairman of a Committee on Legislative Matters and has as members of his committee: Dr. John Brewer, Dr. Albert V. Hardy, Dr. Maurice R. Hilleman and Dr. Roger Reid.

Dr. Damon feels that his committee should interest itself in local as well as national problems of Legislation. He asks all microbiologists to inform him or one of the committee members of any legislation which is of importance to microbiologists.

ABOUT PRESIDENT'S FELLOWSHIPS

Applications for President's Fellowships sometimes are received only a short time before the proposed date of initiation of the Fellowship program. The Committee must carry on its deliberations by mail. To provide adequate time for consideration of proposals, therefore, an applica-

tion for a President's Fellowship must be received by the Committee at least 6 weeks before the date of initiation of the proposed program. Exceptions to this policy will be made only under very unusual circumstances.

R. L. STARKEY, *Chairman*
I. C. GUNSALUS
C. A. EVANS

NATIONAL PSORIASIS RESEARCH ASSOCIATION

A non-profit association organized to raise funds to finance research on psoriasis has been formed with headquarters in California. The program of the association is threefold: (1) to encourage and finance research by qualified personnel at medical schools and research organizations; (2) to keep the membership informed of the progress of the programs; and (3) to stimulate public education concerning the known facts on psoriasis.

The association administers a $1,000 award given annually for what is judged to be the best psoriasis research project. Inquiries about the association's program and the award should be addressed to:

MRS. DIANE MULLINS
Psoriasis Research Association
161 Rockridge Road
San Carlos, California

SPECIAL ISSUE OF THE JOURNAL OF APPLIED BACTERIOLOGY

The *Journal of Applied Bacteriology* (British) is normally published biannually, issues appearing in June and December. In 1957 three numbers were published, the third appearing in December, 1957. This extra number of the Journal contained the papers read at a special symposium of the Society for Applied Bacteriology held in July, 1957. The subject of the symposium was "Bacterial spores" and the topics ranged from the anatomy of the spore to recent work of fundamental importance on the propagation of bacteria. The papers also had an important bearing on practical matters such as the control of bacteria.

Orders for the special issue (35/–) and new orders for the Journal itself (35/– per issue) should be sent to Mr. A. H. Walters, Honorary Publications Manager, Society for Applied Bacteriology, Milton-Deosan Research Laboratory, 64 Wimpole Street, London, W.1.

ALLERTON SPORE SYMPOSIUM

The A.I.B.S. has published the papers from the 1957 Allerton Spore Symposium as an addition to its *Symposium Proceedings Series*. The volume, edited by Orin Halvorson, contains the following papers: The Mineral Requirements for Sporulation, Harold R. Curran; An Approach to Synchronous Growth for Spore Production in *Clostridium roseum*, R. E. Collier; The Effect of Nutritional and Environmental Conditions of Sporulation, Z. John Ordal; Bacterial Spore Germination—Definitions and Methods of Study, L. L. Campbell, Jr.; Effect of Moisture Activity on Germination, R. J. Beers; Activators and Inhibitors of Germination, C. F. Schmidt; Chemical Changes Occurring During Spore Germination, Joan F. Powell; Cytological Changes Occurring During Germination, C. F. Robinow; Enzymes Active in the Intact Spore, Norman L. Lawrence; Enzymes Dormant in the Intact Spore, G. G. Krishna Murty; Non-oxidative Enzymes of Spore Extracts, H. S. Levinson; Oxidative Enzymes of Bacterial Spore Extracts, Harlyn Halvorson; Supplemental Notes, Joan F. Powell.

The price is $4.75 ($3.75 to A.I.B.S. members). Address inquiries and orders to:

American Institute of Biological Sciences
2000 P Street, N. W.
Washington 6, D. C.

CONCEPTS OF BIOLOGY

The April issue of *Behavioral Science* contains a symposium on basic theory of biology under the title "Concepts of Biology". The symposium is the report of a free and lively discussion among distinguished biologists from different fields concerning theoretical nations underlying current thinking in biology. Orders for the April issue ($1.75) can be placed with *Behavioral Science*, Mental Health Research Institute, University of Michigan, Ann Arbor, Michigan.

O.N.R. RESEARCH CONTRACTS

During the first six months of Fiscal Rear 1958 (1 July 1957–31 December 1957) the Biological Sciences Division of Office of Naval Research has awarded a total of 122 research contracts. Of these 30 support work in physiology, 15 in biochemistry, 25 in microbiology, 28 in medicine and dentistry, 24 in biology.

LETTER TO THE EDITOR

February 4, 1958

Dear Dr. Foster:

A recent decision of the Civil Service Commission is particularly discriminatory against bacteriologists in Federal service. Biochemists and physical scientists have been automatically moved to the top salary level within their Federal classification grade for ostensible reason of scarce supply. Clinical bacteriologists are left looking on in respectful awe at the recognition accorded their biochemist colleagues working in the same hospital laboratories.

Is it that we bacteriologists fail to rate as scien-

1958 OFFICERS OF LOCAL BRANCHES

Branch	*President*	*Vice President*	*Secretary-Treasurer*	*Treasurer*	*Council*
Allegheny	Wm. McD. Hammon U. of Pittsburgh Sch. of Public Health Pittsburgh 13, Pa.	Aaron H. Stock U. of Pittsburgh Sch. of Med. Pittsburgh 13, Pa.	Gladys Sather U. of Pittsburgh Sch. of Public Health Pittsburgh 13, Pa.		James J. Reid Pennsylvania State U. University Park, Pa.
Northern California and Hawaii	H. J. Phaff U. of California Davis, Cal.	K. Hok Cutter Laboratories Berkeley, Cal.	J. L. Stokes Western Regional Lab. Albany, Cal.		M. P. Starr U. of California Davis, Cal.
Southern California	Henry E. Weimer Sch. of Med. U. of California Los Angeles 24, Cal.	Dean A. Anderson L. A. State Coll. 855 N. Vermont Ave. Los Angeles 29, Cal.	John E. Forney L. A. City Health Dept. 111 E. First St. Los Angeles 12, Cal.		Milo Don Appleman U. Southern Cal. Los Angeles 7, Cal.
Colorado-New Mexico-Wyoming	Margaret P. Stimmel Veterinary Bldg. Colo. State U. Fort Collins, Colo.	Leroy Maki U. of Wyoming Laramie, Wyoming	Mildred W. Taylor V. A. Hospital 1055 Clermont St. Denver, Colo.	Mary V. Rothlauf U. of Colorado Med. Sch. 4200 E. 9th Ave. Denver 20, Colo	James L. Tong V. A. Hospital 1055 Clermont St. Denver, Colo.
Connecticut Valley	Ethel T. Eltinge Mt. Holyoke College South Hadley, Mass.	Manley Mandel U. of Mass. Amherst, Mass.	Elizabeth D. Robinton Burton Hall Smith College Northampton, Mass.		Earle K. Borman Conn. State Lab. Box 2340 Hartford, Conn.
South Florida	M. Michael Sigel U. of Miami Sch. of Medicine Coral Gables, Fla.	Virginia N. Darrock 1925 Alamanda Dr. North Miami, Fla.	Murray M. Streitfeld U. of Miami Sch. of Medicine Coral Gables, Fla.	Frank J. Roth, Jr. U. of Miami Sch. of Medicine Coral Gables, Fla.	Warren Hoffert State Board of Health 900 Courthouse Bldg. Miami, Fla.
Illinois	Ralph E. Noble South Dist. Filt. Plant 3300 Cheltenham Pl. Chicago, Ill.	Francis M. Clark U. of Illinois 359 Noyes Lab. Urbana, Ill.	Charles J. Rickher Abbott Lab. Research Division North Chicago, Ill.	Norbert M. Szukala The Armour Auxillaries 1355 W. 31st St. Chicago, Ill.	James B. Evans Am. Meat Inst. Foundation 939 E. 57th St. Chicago, Ill.
Indiana	Eugene D. Weinberg Indiana U. Bloomington, Ind.	Charles L. Baldwin Pitman-Moore Co. Indianapolis, Ind.	Walter A. Konetzka Indiana U. Bloomington, Ind.		J. M. McGuire Eli Lilly & Co. Indianapolis, Ind.
Intermountain	Stanley Marcus U. Utah Med. Sch. Salt Lake City, Utah	David M. Davidson Brigham Young U. Provo, Utah	Paul B. Carter Utah State U. Logan, Utah		Don H. Larsen Brigham Young U. Provo, Utah
Kentucky-Tennessee	John M. Woodward U. of Tennessee Knoxville, Tenn.	Emil Kotcher U. of Louisville 101 W. Chestnut St. Louisville 2, Ky.	Ilda McVeigh Vanderbilt U. Nashville, Tenn.		G. E. Stapleton 148 Pembroke Rd. Oak Ridge, Tenn.

1958 OFFICERS—*Continued*

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Northwest	L. Leon Campbell, Jr.	J. J. Munoz	Jane Nichio		

Northwest	L. Leon Campbell, Jr. State Coll. of Wash. Pullman, Wash.	J. J. Munoz Montana State U. Missoula, Mont.	Jane Nishio Rocky Mtn. Lab. Hamilton, Mont.	V. A. Cherrington U. of Idaho Moscow, Idaho
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Eastern Pennsylvania	Morton Klein Temple U. Sch. of Medicine Philadelphia 40, Pa.	none	Elizabeth Fowler Temple U. Broad & Montgomery Sts. Philadelphia 22, Pa.	Ruth Miller Woman's Medical Coll. Philadelphia 29, Pa.
Rio	Amadeu Cury Inst. de Microbiologia Av. Pasteur, 458 Rio de Janeiro, Brazil, S. A.	Gobert Araujo Costa Inst. Oswaldo Cruz Caixa Postal 926 Rio de Janeiro, Brazil, S. A.	Vinicius Moreira Dias Ist. Oswaldo Cruz Caixa Postal 926 Rio de Janeiro, Brazil, S. A.	Joaquim Travassos Inst. de Microb. Av. Pasteur, 458 Rio de Janeiro, Brazil, S. A.
South Central	R. J. Strawinski Louisiana State U. Baton Rouge, La.	J. D. Schneidau, Jr. Tulane U. Med. Sch. 1439 Tulane Ave. New Orleans, La.	H. Baer Tulane U. Med. Sch. 1430 Tulane Ave. New Orleans, La.	Rene J. Bienvenue Northwestern State Coll. Natchitoches, La.
Southeastern	Elaine Updyke Com. Dis. Center P. O. Box 185 Chamblee, Ga.	Robert D. Francis U. of Ala. Med. Cent. 1919-7th Ave., S. Birmingham 3, Ala.	Alice Brim Ga. Dept. Pub. Health 12 Capitol Sq., S.W. Atlanta, Ga.	John W. Foster Sch. Vet. Med. U. of Georgia Athens, Ga.
Texas	Roland B. Mitchell Sch. of Aviation Med. Randolph AFB, Texas	Jackson W. Foster U. of Texas Austin, Texas	Capt. Irving Davis Sch. of Aviation Med. Randolph AFB, Texas	V. T. Schuhardt U. of Texas Austin, Texas
Virginia	D.H. Caminita 501 N. Lincoln St. Arlington 1, Va.	Miles E. Hench Medical Coll. of Va. Richmond, Va.	Quentin N. Myrvick U. of Virginia Sch. of Medicine Charlottesville, Va.	A. E. Feller Sch. of Medicine U. of Virginia Charlottesville, Va.
Washington	Bernice E. Eddy National Institutes of Health Bethesda 14, Md.	Roy C. Dawson F.A.O. 1325 C. Street, S.W. Washington 25, D. C.	Charlotte C. Campbell Walter Reed Army Inst. of Research Washington 12, D. C.	Morrison Rogosa National Institutes of Health Bethesda 14, Md.

tists or only that we don't rate as sufficiently scarce scientists? It would be important to know if there are just too many of us extant.

The American Institute of Biological Sciences published a letter of protest in *Science*, January 17, 1958. I should like to know if steps have been taken to lodge vigorous formal protest from our Society of American Bacteriologists or/and American Academy of Microbiology?

SIDNEY J. KLEIN, PH.D.
Long Beach, California

Vigorous and formal written protests were lodged promptly by the Society, the American Academy of Microbiology and the American Institute of Biological Sciences. Recipients of the letters included President Eisenhower, Dr. James R. Killian, the Chairmen of the House and Senate Civil Service Committees, the members of the Civil Service Commission, numerous Cabinet members, officials of several Federal Government Departments, and others. The Civil Service Commission has announced that it is making a study of the availability of biologists, agriculturists and bacteriologists. *Editor*

SUMMER COURSES, 1958

Considering the late circulation of the January 1958 issue of *Bacteriological News* the response to our request for information on summer courses was gratifying. It is hoped that the following summary will be helpful. We ask the indulgence of the responding individuals for editorial revision of their material.

All courses listed below are firmly scheduled unless otherwise noted. Dates are 1958. Further information may be sought from the indicated contacts.

BRANDEIS UNIVERSITY, Waltham 54, Mass. Harold P. Klein, Chairman, Dept. of Biology. *Institute in Photobiology*. Graduate and postdoctoral. First half: 6/23–7/11 (Livingston, Rabinowitch, Stanier, Wald). Second half: 7/14–8/1 (Delbruck, Kok, Livingston). Fees: $40 half course, $80 full course, $200 complete Institute.

CATHOLIC UNIVERSITY, Washington 17, D. C. Dr. E. R. Kennedy, Biology Dept. *Pathogenic Microbiology* (Biol. S 507); 4 credits; undergraduate, graduate; 6/30–8/8; $20 per semester hour plus $5 registration; contingent on 7 applicants.

CORNELL UNIVERSITY, Laboratory of Bacteriology. Address: Director of Summer Sessions, 117 Edmund Ezra Day Hall, Cornell U., Ithaca, N. Y. *General Bacteriology;* students in Biology and Bacteriology, Home Economics Majors, Science and Home Economics teachers; 7/7–8/16; $20 per credit hour.

ILLINOIS INSTITUTE OF TECHNOLOGY, Technology Center, Chicago 16. Dr. L. R. Hedrick, Chairman, Dept. of Biology. *Bacteriology* (Biol. 421); credit 4 hours; $84; contingent on 7 applicants. *Research:* Biol. 491, 591, 691 toward BS, MS, PhD, respectively; credit 2–4 hours; $56–$84 according to credit. All dates 6/23–8/15.

JOHN CARROLL UNIVERSITY, University Heights, Cleveland 18, Ohio. Dr. Jean M. Cummings, Dept. of Biology. *General Bacteriology* (B1 S110); credit 4 hours; undergraduate; 7/22–8/5; $70.

KANSAS STATE COLLEGE, Manhattan. Alfred F. Borg, Head, Dept. of Bacteriology. *General Microbiology* (Bact. 110); 3 credits; undergraduate, introductory. *Sanitary Bacteriology Laboratory* (Bact. 565); 2 credits; advanced undergraduate, graduate; contingent. *Advanced Immunology* (Bact. 840); 3 credits; graduate. All dates 6/10–8/8. All fees: $45.50 resident, $85.50 nonresident; prorated for 3 or less credit hours. Also: *Problems* and *Research*.

LOYOLA UNIVERSITY, 6525 Sheridan Road, Chicago 26, Ill. Dr. Frank E. Halleck, Head, Microbiology Division, Dept. of Biological Sciences. *Elementary Bacteriology I* (Biol. 211); available evenings 6/18–8/8, or days 6/30–8/8. *Elementary Bacteriology II* (Biol. 212); days only, 8/11–9/8; contingent on 10 applicants. All fees: $15 per semester hour plus $15 laboratory.

OHIO STATE UNIVERSITY, Columbus 10. J. M. Birkeland, Chairman, Dept. of Bacteriology. *Microbiology in Relation to Man* (Bact. 509); 5 credit hours, non-science students and as sole course for certain others. *Bacteriology for Nurses* (Bact. 510); 5 credit hours. *General Bacteriology* (Bact. 607); 5 credit hours. *Principles of Infection and Resistance* (Bact. 622); 3 credit hours. *Serology* (Bact. 623); 3 credit hours. Also facilities for graduate work in aquatic bacteriology at Put-in-Bay. All dates 6/18–8/29. Write for fees.

UNIVERSITY OF CALIFORNIA, School of Medicine, Los Angeles 24. A. F. Rasmussen, Jr., M.D., Dept. of Infectious Diseases. *Medical Virology* (208); graduate students with basic training in biology and medical students; 6 weeks, beginning third or fourth week in June; contingent on 6 applicants; $86.

UNIVERSITY OF KENTUCKY, Lexington. Dr. M. Scherago, Head, Dept. of Bacteriology. In following, U, J, S, G = undergraduate, junior, senior, graduate. *Principles of Bacteriology* (52) U. *Pathogenic Bacteriology* (103) JSG. *Laboratory Diagnosis* (110a & b) JSG. *General Pathology* (111) SG. *Clinical Mycology* (210) G. *Disinfectants & Antibiotics* (224) G. *Electron Microscopy* (270) G. *Viruses and Rickettsiae* (272 G. Firm: 52, 103, 110, 111. Other contingent on 6 applicants by 6/11. All dates 6/9–8/2. In-state fees: full-time $40; part-time, per semester hour $7 U, $9 G. Out-of-state: $90, $15, $20.

UNIVERSITY OF MICHIGAN, Medical School, Ann Arbor. Dr. W. J. Nungester, Chairman, Dept. of

Bacteriology. For course 220: Dr. Donald J. Merchant. *Pathogenic Microbiology* (Bact. 103); 4 hours; medical technicians. *Medical Microbiology* (Bact. 111); 6 hours; medical, graduate. *Tissue Culture Techniques* (Bact. 220); 4 hours; graduate, postgraduate; by permission. All dates 6/23–8/2. In-state fees: undergraduate and graduate $70, medical $115. Out-of-state: $155, $225. Postgraduates with PhD. or ScD.: write Graduate School for arrangements.

UNIVERSITY OF MINNESOTA, Medical School, Minneapolis 14. Dr. Dennis W. Watson, Dept. of Bacteriology and Immunology. *General Bacteriology* (Bact. 53); 5 credits; undergraduate; 6/16–7/19. *Immunology* (Bact. 116); 4 credits; upperclass undergraduate, graduate; 7/21–8/23. *Research* (Bact. 201); credits arranged; 6/16–7/19 or 7/21–8/23. All fees: 4 credits or less $52.50; 5–9 credits $64; microscope $3.

UNIVERSITY OF WISCONSIN, Medical School, 426 North Charter St., Madison 6. Dr. D. L. Walker, Dept. of Medical Microbiology. *Virus and Rickettsial Diseases of Man* (207); graduate only; 6/30–8/23; $50.

UTAH STATE UNIVERSITY, Logan. Dr. W. Whitney Smith, Dept. of Bacteriology. *Elementary Bacteriology* (no laboratory); 5 credits; 7/21–8/22; $25.

FRANK LANNI
Emory University

ELECTRON MICROSCOPY SHORT COURSE

Cornell University's Department of Engineering Physics has announced a "Summer Laboratory Course in Techniques and Applications of the Electron Microscope", to be held from June 16 through July 3, 1958. The program is intended primarily for senior workers in the biological and medical sciences who use the electron microscope in their research.

The course will include lectures covering the basic principles, methods, and applications of the electron microscope. The laboratory work will offer the opportunity for instruction and practice in a wide range of techniques especially applicable to biological studies. The course is under the direction of Professor Benjamin M. Siegel who will be assisted in the lectures, discussions and demonstrations by a number of workers prominent in biological research applications of the electron microscope. Among these will be Keith Porter of the Rockefeller Institute, C. E. Hall of MIT, Robley Williams of the University of California, and Paul Kaesberg of the University of Wisconsin.

Registration for the course is limited. Applications should be made by May 1, 1958 to Professor Benjamin M. Siegel, Rockefeller Hall, Cornell University, Ithaca, New York.

SHORT COURSE IN SHELLFISH SANITATION

A one-week course in shellfish sanitation will begin May 12, 1958, at the Robert A. Taft Sanitary Engineering Center in Cincinnati. Representatives of both public agencies and the shellfish industry are invited to participate in the course. There is no tuition fee.

Material to be studied includes field practices and laboratory procedures applicable in safeguarding the sanitary quality of oysters, clams, and other shellfish. The course is aimed toward engineers, scientists, and others actively engaged in shellfish sanitation control. About half of the training will be in laboratory work. Bacteriological and chemical determinations will be made on samples of shellfish and sea water and results will be computed, interpreted and discussed.

Information on enrollment may be obtained from Chief of Training, Robert A. Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati 26, Ohio.

BACTERIAL VIRUS SHORT COURSE

A course on "Temperate bacterial viruses" will be given in the summer 1958 at the University of Southern California in Los Angeles. The course will last three weeks (June 23 through July 12). It will consist of daily laboratory sessions with lectures and discussion periods. The course is meant to be an introduction to research in the field of temperate bacteriophages and their relationship to the host-cell. Interested persons are advised to write Dr. G. Bertani, U. S. C. School of Medicine, 2025 Zonal Ave., Los Angeles 33, Cal. for more detailed information.

1958 SUMMER COURSE IN TISSUE CULTURE

The Tissue Culture Association is again sponsoring a Course of instruction in the principles and techniques of cell and tissue culture. The Course will be under the direction of Dr. John Paul, University of Glasgow, Scotland. It will be given at the University of Colorado School of Medicine, Denver, Colorado, from July 7th through August 1st. The tuition will be One Hundred Dollars.

This is an intensive four-week course dealing with the structure and function of living cells, techniques of tissue culture and interpretation of results. It is designed to give to responsible investigators a background of general information on cultured cells and an opening wedge of training in the application of the method to problems in several current areas of research.

Due to limitations of laboratory space, only fifteen active participants will be accepted. These places will be allocated in the main to those with no previous tissue culture experience who, in the committee's opinion, will derive benefit from the Course. In addition, fifteen auditors will be ac-

cepted. Places as auditors will be allocated to senior applicants with predominantly administrative responsibilities and to those who have already had practical experience of tissue culture techniques but are likely to profit from the Course.

The morning work includes lectures and discussions on practical aspects of tissue culture techniques and demonstrations of procedures to be used in the laboratory. Each active participant prepares and manages his own cell cultures. Auditors attend all sessions but do not carry out the laboratory exercises. Afternoons afford opportunity for library work and for consultation with the staff concerning the projects contemplated by each of the class members. Evening lectures Monday through Friday by members of the staff and by distinguished guest lecturers cover various fields of research in which the tissue culture method has been used to advantage. The evening lectures are open to members of the Faculty of the University of Colorado and to wives and families of participants in the Course.

The Course is designed specifically for post doctoral workers (M.D. or Ph.D.) who plan to use cultured tissues in their research or teaching. Requests for application forms should be addressed to Dr. Mary S. Parshley, College of Physicians and Surgeons, 630 West 168th Street, New York 32, N. Y., and should be completed and returned to her not later than May 1st. Successful candidates will be notified about May 15th.

NOMENCLATURE OF CELL STRAINS

At the International Tissue Culture Meeting, held in Glasgow on the 26th and 27th August, 1957, the subject of the nomenclature of cell-strains used in tissue culture was considered. After general discussion, a committee was appointed and recommendations were made. It was suggested that authors should give the following information when first mentioning a cell strain in the course of a publication.

1. Whether the tissue of origin was normal or neoplastic and, if neoplastic, whether benign or malignant.
2. Whether the tissue was adult or embryonic.
3. Animal species of origin.
4. Organ of origin.
5. The cell-type (if known).
6. The designation of the strain.
7. Whether the strain has been cloned and, if so, the clone number.
8. The reference to the original article in which the strain was described.

It was further suggested that the designation of the strain should consist of a series of not more than four letters indicating the laboratory of origin, followed by a series of numbers indicating the strain, e.g. NCL 123. Thus, a strain might be described: Normal adult rat heart fibroblast, strain NBG 111, clone 29 (Lobachevsky, Z. (1922) J. Metaphys. Cytol. *99*, 77). Subsequently in the same communication it would suffice to refer to the strain by its strain designation.

The undersigned was elected Chairman of an ad hoc committee to consider methods of codifying this scheme, and was instructed to circulate the proposals to appropriate journals with the object of making them widely known to all engaged in culturing animal cells.

Dr. John Paul
H.E.R.T. Tissue Culture
Laboratory, University of Glasgow

TROPICAL MEDICINE AND MALARIA CONGRESSES

The Sixth International Congresses on Tropical Medicine and Malaria will be held in Lisbon, Portugal, from September 5 to 13, 1958. Your Secretary has received a limited supply of the Preliminary Announcements for distribution on request from interested individuals. The Secretary General of the Congresses is Professor Manuel R. Pinto, Instituto de Medicina Tropical, Lisboa, Portugal.

FELLOWSHIPS AVAILABLE

There are several research fellowships available in the Department of Sanitation of Rutgers University. These lead to M.S. and Ph.D. degrees in the field of water, industrial wastes, stream pollution and air pollution. Previous training in these fields is not a requirement for eligibility inasmuch as courses and training are offered in the department of Sanitation and through the cooperation of other divisions and departments of Rutgers University (e.g. Microbiology, Zoology, Meteorology and Chemistry). Emphasis is placed on microbiological, biological, and biochemical aspects of sanitation, in which many fundamental phenomena are encountered.

The Department of Sanitation shares in the use and maintenance of a radiochemistry laboratory, the facilities of which are available to those with proper qualifications. A course in radiochemistry is available.

Candidates should have training in bacteriology, biology, chemistry, or in allied fields, and should be citizens of the United States or Canada.

Stipends are $1800 up to $2400, tuition is free, and 12 credit hours may be taken per semester. One month per year of vacation time is included.

Address inquiries to Dr. H. Heukelekian, Department of Sanitation, Rutgers University, New Brunswick, New Jersey.

ASSISTANTSHIPS AVAILABLE

Graduate Assistantships in Microbiology are available at the University of Maryland Schools of

Dentistry and Pharmacy. The compensation is $163.50 per month plus free tuition and laboratory fees. Graduate work leading to the Master's and Doctor's degree is available. Direct your inquiries immediately to Donald E. Shay, Ph.D., University of Maryland, 618 West Lombard Street, Baltimore 1, Maryland.

MARINE BACTERIOLOGY STATION

The Institute of Marine Science of the University of Texas has recently established a marine microbiology section under the direction of Dr. Carl H. Oppenheimer. The Institute is located on Mustang Island at Port Aransas, Texas, approximately 25 miles north of Corpus Christi. The laboratory has been established to provide facilities to study the relationships of bacteria to the many environments near the Institute. Close at hand are attached algal flats, muddy bottom bays, accumulations of organic matter, oyster reefs, continental shelf environments, rock jetties, open beaches and various sources of industrial and sewage pollution. A course in marine microbial ecology will be offered during the summer. A curriculum has been established for advanced degrees with emphasis on marine bacteriology through the Department of Bacteriology, The University of Texas, in Austin, Texas.

Ph.D. PROGRAM AT UTAH STATE UNIVERSITY

Concurrent with the change of the name of Utah State Agricultural College to Utah State University, approval has been given by the graduate council of Utah State to the Department of Bacteriology to offer a Ph.D. in microbiology. This Ph.D. is built around the course work offered within the Department of Bacteriology by Winslow Whitney Smith, Ph.D. Wisconsin; Kenneth R. Stevens, Ph.D. Rutgers; Lewis W. Jones, Ph.D. Stanford; Paul B. Carter, Ph.D. University of Utah; and around the excellent programs in protozoology, mycology, virology, veterinary pathology, and biochemistry offered in the departments of Zoology, Botany, Veterinary Science, and Chemistry. Three of the four Bacteriology department members have centered their research on physiological problems and the doctoral research now being carried out deals largely with the physiology of certain animal pathogens.

HOW TO OBTAIN CAREER BOOKLET

Requests for copies of the booklet, "A Career in Bacteriology", should be directed to the Society Business Manager, Mr. F. C. Harwood, Mt. Royal and Guilford Avenues, Baltimore 2, Maryland. Requests for 1 to 25 copies are filled free of cost. Larger orders, usually from institutions, bear the following modest charges: 26 to 500 copies—12 cents each; over 500 copies—10 cents each.

JOURNALS FOR SALE

Dr. Sheldon S. Goldberg has the following journals for sale:

Journal of Bacteriology—volumes 61 through 74—unbound

Journal of General Microbiology—volumes 8 through 17—unbound

Journal of Applied Microscopy—volumes 1 through 4 (1898–1901)—bound

Inquiries should be addressed to Dr. Goldberg at 6 Anselm Terrace, Brighton 35, Massachusetts.

F. W. TANNER MEMORIAL

Students and colleagues of Dr. F. W. Tanner have established a Tanner Memorial Fund, which is to be used for a portrait of Dr. Tanner to be placed in the seminar room of the new Biology Building now being built on the campus of the University of Illinois. It is hoped that friends of Dr. Tanner will contribute. About $600 will be needed, nearly half of which has already been raised. Contributions should be sent to F. M. Clark, Department of Bacteriology, University of Illinois, Urbana, Illinois.

NECROLOGY

Henry W. Schoenlein

The members of the Society of American Bacteriologists, as well as microbiologists everywhere, lost a wonderful friend and counselor on July 27, 1957. On this date, Henry W. Schoenlein, "Bill", passed away in the Gaylord Hospital near his summer home in Northern Michigan. Bill was born March 25, 1903, in Grimes, Iowa. Following graduation from Iowa State College, he joined the research staff of the Difco Laboratories.

Bill's ready smile, his enthusiastic interest in all phases of microbiology and his great interest in his associates and their problems will be long remembered.

Otto Rahn

Otto Rahn was born near Tiegenhof, West Prussia on April 9, 1881, and died September 26, 1957 at the home of his daughter in Millsboro, Delaware. He received his doctorate in Organic Chemistry at Göttingen in 1902. There he remained for the next four years as a teaching assistant in dairying. While there he was associated with Dr. Alfred Koch, Editor of Koch's Jahresbericht für Bakteriologie. During the summers he was associated with Drs. Henneberg, Lindner and Delbruech at the Inst. für Garüngsgewerbe in Berlin, and for a year with Prof. Hanze in Soil Bacteriology at Halle. In 1907 he became Asst. Prof. in Bacteriology at Michigan State College working with Dr. C. E. Marshall. While he was at Michigan State Miss Bell Farrand was assigned to him as an

assistant. They were married in 1911. When Dr. Marshall went to Massachusetts State College in 1912, Dr. Rahn accepted an appointment at the University of Illinois in the Department of Botany with Dr. Burrell. Two years later he returned to Germany to visit relatives. Since he had not received his U. S. citizenship, he was interned in Germany and, in 1916, drafted into the German Army. He spent two years in Latvia as an Army Clerk. Later he was appointed Professor of Dairy Physics in Kiel, Germany where he remained until 1926. While there he laid the groundwork for his book, Physik der Milchwirtschaft, published with Dr. Paul Sharp. Following a series of lectures in the United States in 1926, he was appointed Professor of Bacteriology at Cornell University in 1927, where he remained until his retirement in 1949. Since such an active mind could not remain idle he then accepted a position at the University of Idaho for two years. While there he received a U. S. Public Health Service Grant enabling him to continue his research on the aging of bacteria.

Although Dr. Rahn received his doctorate in Organic Chemistry his life work carried him into the fields of dairy physics and bacteriology. His studies on the physics of cream and butter laid the groundwork for much further work. His early work at Michigan State on the fermentation of pickles opened up new thoughts. However during his years at Cornell, he was best known for his studies on growth rates and death of bacteria and for his course in bacterial physiology and taxonomy. During this active career, he published about 150 scientific articles and 9 books.

Those of us who have had the privilege of his association and teaching appreciate his active mind and wise counsel and know that we have lost a good friend.

C. S. PEDERSON

NEWS ABOUT OUR MEMBERS

Carl Lamanna has been appointed scientific director of the Naval Biological Laboratory and the affiliated Naval Medical Research Unit No. 1 at the University of California in Berkeley. Dr. Lamanna was formerly at Johns Hopkins University.

Hutton D. Slade has been appointed an Associate Professor in the Department of Microbiology of Northwestern University Medical School. He was for the past nine years a Senior Staff Member of The Rheumatic Fever Research Institute. Dr. Slade is an Established Investigator of the American Heart Association and a member of the Commission on Streptococcal Diseases of the Armed Forces Epidemiological Board.

O. K. Sebek addressed the seminar in microbiology at the University of Missouri in October, 1957. His subject was "Microbial Transformations of Steroids". Frank B. Engley, Chairman of the department, reports an enthusiastic reception to the talk. Dr. Sebek is a member of the research staff of The Upjohn Company.

Samuel J. Ajl, assistant chief of the Department of Bacteriology, Walter Reed Army Institute of Research, has been awarded a National Science Foundation Fellowship for study at Oxford University in England. He will work in the laboratories of Professors Hans Krebs and W. E. van Heyningen. While in Europe Dr. Ajl will participate in a symposium on bacterial metabolism at the International Congress of Biochemistry in Vienna, as well as present his recent findings dealing with bacterial toxins at the 7th International Congress for Microbiology in Stockholm. He has also accepted invitations to lecture at the Hebrew University in Jerusalem and at Delft, Holland.

John E. Blair received the 1957 Kimble Methodology Research Award for his work on phage typing of staphylococci. The award, consisting of $1,000 and an engraved plaque, was presented to Dr. Blair at the Conference of State and Provincial Public Health Laboratory Directors held in Cleveland on November 11, 1957. Dr. Blair, a former Secretary-Treasurer of the Society, is on the staff of the Hospital for Joint Diseases in New York City.

Harry E. Goresline, Associate Scientific Director of the Quartermaster Food and Container Institute for the Armed Forces, was recipient of a 1957 National Civil Service League Merit Citation. These awards are granted to bring national recognition to significant careers in Federal service. Dr. Goresline was one of three nominees so honored and represented the Quartermaster Corps. He has completed 27 years of Government service.

J. A. Jensen, Marquette University, and H. S. Moyed, Harvard University, are recipients of Lederle Medical Faculty Awards for 1958. These awards are intended for the purpose of strengthening the preclinical departments of medical schools in the United States and Canada by contributing to the support of the teaching and research activities of members of such departments who already have demonstrated high quality of performance but who have not yet attained permanent faculty tenure.

R. J. Allgeier was recently appointed a member of the Plans and Evaluation Staff for the Director of Development, of the Army Chemical Corps Biological Warfare Laboratories, Fort Detrick, Frederick, Maryland. Dr. Allgeier has been at Fort Detrick since 1954 as chief of the Virus Pilot Plant.

Keith E. Jensen, Communicable Disease Center, Montgomery, Alabama, was named one of America's Ten Outstanding Young Men of 1957 by the United States Junior Chamber of Commerce. This award, open to men between the ages of 21 and 36, has been given by the Jaycees

for the past 19 years. Dr. Jensen, who was 33 when chosen for the award, was cited for his contribution "to the development of the first successful vaccine to combat Asiatic Flu."

LOCAL BRANCH ACTIVITIES

THE YOUNGER GENERATION NEEDS US

A significant part of your Secretary's mail is from high school and junior high school pupils who think they may be interested in bacteriology. The requests range literally from "Tell me all about bacteria and bacteriologists" (your Secretary can do neither) to specific questions on training required, employment opportunities, and the like. Each writer receives a copy of "A Career in Bacteriology" and as complete an answer to questions as possible.

How do these youngsters get interested in bacteriology? They seldom say in their inquiries, but it would appear we have a fertile field to cultivate. Your Secretary is not alone in the opinion that individual members and their local branches can do much to interest young people in bacteriology. Some of the branches are already active, for example:

The *Virginia Branch* offers an award of $25.00 and a certificate of merit for the outstanding exhibit or scientific report on microbiology presented at the annual meeting of the Junior Academy of Science held in conjunction with the Virginia Academy of Science. (*Bacteriological News*, January, 1957.)

The *Indiana Branch* awards $25.00 to the member of the Junior Academy of Sciences who presents the outstanding paper or exhibit in bacteriology or microbiology at the fall meeting of the Academy.

The *North Central Branch* also has acted to recognize high school students who present microbiological exhibits or papers at Science Fairs, Junior Academies, and other demonstrations of student activity in its area. The members have been asked to look for, and to notify the Branch secretary, of students who qualify for recognition. Contacts have also been made with representatives of the Science Fairs and State Academies of Science to let them know that they may be contacted by members of the Branch for information regarding students. Recognition will take the form of a letter of commendation and encouragement signed by the officers of the Branch.

The *New Jersey Branch* (Theobald Smith Society) has offered a $25.00 prize for the best microbiological exhibit at the 1958 Greater Newark Science Fair.

Some of the Branches direct their attention to the college student. Since 1956 the *Ohio Branch* has given an award each year to the graduate student who is judged to make the best presentation of a paper at a meeting of the branch. The award, a year's membership in the Society, was won in 1957 by Miss Grace Frye of Ohio State University.

For the past three years the *New Jersey Branch* has set aside one meeting a year for presentation of papers by young investigators. The usual formalities, such as the requirement for an abstract, are omitted, and every effort is made to stimulate interest among the younger group of workers. The Branch Secretary reports this program has been "stimulating, challenging, and extremely popular with the younger members of the group and, in particular, with graduate students. Response has been encouraging and attendance at these meetings has usually exceeded that of the other regular monthly programs. Question and answer periods following these discussions have been lively, thoughtful and stimulating."

The New Jersey group also has a Career Committee (*Bacteriological News*, August, 1957) which is interested not only in placing graduates but in such things as cooperation with high schools and science clubs; advancement of the summer employment program for high school and college teachers; microbiological themes and science fair exhibits; organization of tours for high school students through scientific laboratories and industrial institutions; and individual guidance for high school students planning a college education in microbiology. The committee is not interested in "selling" microbiology but in acquainting students with its scope and potential.

For several years the *Maryland Branch* has given its J. Howard Brown Award to the "student bacteriologist judged most outstanding." The award consists of an engraved citation and one year memberships in the National Society and in the Maryland Branch.

The Maryland Branch also has agreed to purchase a color print of the Indiana University film titled "A Career in Bacteriology." The film will be made available to the Baltimore City School System's Division of Guidance and Placement for showing in guidance conferences.

Another effort toward interesting students was made recently when the *South Florida Branch* and the University of Miami Medical School played host to 10 Dade County senior high schools on January 25, 1958. Approximately 350 science students, and their teachers viewed the Indiana

University film, "A Career in Bacteriology" and then participated in a guided tour of the teaching and research laboratories of the Medical School. The program was designed to acquaint students with the general fields of bacteriology and allied sciences. Prepared demonstrations in the microbiology, biochemistry and physiology laboratories were employed to stimulate interest and questions among the students. The various technical and research opportunities for college graduates in the field of microbiology were described.

Does your branch do anything to stimulate interest and excellence in bacteriology? If so, let the Editor know. We'll be happy to spread the word to other branches in the pages of *Bacteriological News*.

Also, remember that the Society offers a suitable citation or plaque to the school or individual sponsoring a high school or junior high school pupil who wins a prize for a microbiology project or exhibit in a science fair or contest held under the auspices of a local branch or any state academy of science. (*Bacteriological News*, August, 1957, page 5.) We have one customer already. Let's have more.

LINDEGREN WINS 1958 PASTEUR AWARD

The Society of Illinois Bacteriologists named Carl C. Lindegren as the recipient of its 11th Annual Pasteur Award. The presentation was made at a dinner meeting on February 28, 1958, at the Morrison Hotel.

Dr. Lindegren, who is Director of the Biological Research Laboratory at Southern Illinois University, was cited for his "Outstanding contributions to bacteriology, mycology and genetics." He is known internationally as an authority on the genetics of yeasts.

HATS OFF TO THE MARYLAND BRANCH.

In June, 1957, your Secretary wrote each local branch officer explaining the financial problems faced by our journals (and the Society as well). The obvious fact is that costs of printing are rapidly approaching our income. A simple alternative to increasing the dues to meet these rising costs is an increase in the number of subscribers. Each branch officer was given several application blanks and urged to recruit new Society members.

Evidently the Maryland Branch is one that took this plea seriously. In their meeting announcements they have been including an appeal not only for new members of the Maryland Branch but for the National Society as well.

Won't each of you consider yourself chairman of a committee to find at least one new member of the S.A.B. If he (or she) isn't already a member of your local branch, sign him up for that too. Every bacteriologist in the country ought to belong to both his local branch and the National Society. The more members we have, the less it'll cost each member for his journals. We have no way to keep printing costs from rising, but let's find some more bacteriologists to help themselves and us by subscribing to the Society's journals.

Each recipient of *Bacteriological News* for August, 1957, received an application blank. If you lost yours, or have already found a user, simply write the Business Manager for more. His address is: Mr. F. C. Harwood, Mt. Royal and Guilford Avenues, Baltimore 2, Maryland.

FLORIDA BACTERIOLOGISTS MEET

All bacteriologists in Florida were invited to a meeting in the Florida Citrus Building at Winter Haven on December 14, 1957. The program follows:

1. Histopathology of infectious equine anemia. Thomas M. Scotti, Department of Pathology, University of Miami School of Medicine.

2. Approaches to a laboratory diagnosis for equine infectious anemia. V. R. Saurino, Department of Bacteriology, University of Miami School of Medicine.

3. Adaptation of marine bacteria to sodium chloride independence. D. Pratt, and G. Waddell, Department of Bacteriology, University of Florida.

4. Further studies on a "b" cytochrome from *Streptomyces fradiae*. W. Silver, Department of Bacteriology, University of Florida.

5. Observations *in vitro* on the metabolic fate of C^{14} labelled pneumococci in the presence of phagocytes. J. Gelzer, Department of Microbiology, University of Florida College of Medicine.

6. Field studies on immunization against asiatic influenza in various age groups. M. M. Sigel, Department of Bacteriology, University of Miami School of Medicine.

7. Replication of viruses in mammalian cell cultures maintained anaerobically. G. Gifford, Department of Microbiology, University of Florida College of Medicine.

8. The inhibitory effects of human sera on pathogenic fungi. F. J. Roth, Department of Bacteriology, University of Miami College of Medicine.

9. Bacteriologic evaluation of dental injection anesthesia procedures. M. M. Streitfeld, and D. D. Zinner, Department of Bacteriology, University of Miami College of Medicine.

REPORTS FROM LOCAL BRANCH MEETINGS

Southern California Branch (Dean Anderson, (Secretary-Treasurer)

October 8, 1957, Santa Anita Research Building, Children's Hospital, Los Angeles, California.

1. The minoprio test. Charles M. Carpenter, Dorothy H. Heilman, and Jane H. Walker, Department of Infectious Diseases, University of California School of Medicine, Los Angeles.

2. Properdin levels in mice and man with coccidioidomycosis during soluble amphotericin B administration. Caryln Halde, E. G. McNall, Victor G. Newcomer and Thomas H. Sternberg, Division of Dermatology, University of California School of Medicine, Los Angeles.

3. Hemoglobin particles as adjuvants. Eric Nelson, Department of Infectious Diseases, University of California School of Medicine, Los Angeles.

4. Some practical considerations for the isolation and identification of fungi in the laboratory. G. F. Orr, Department of Botany, University of California, Los Angeles.

5. Biologic aspects of the Asiatic flu. A. F. Rasmussen, Department of Infectious Diseases, University of California School of Medicine, Los Angeles.

December 10, 1957, U.C.L.A. Medical Center, Los Angeles, California.

1. Effect of crystal violet concentrations and wash steps on gram positive staining. J. W. Bartholomew, H. Finkelstein and N. Basson, Department of Bacteriology, University of Southern California, Los Angeles.

2. Ultraviolet inhibition of sporulation in *Bacillus cereus*. W. R. Romig and O. Wyss, Department of Bacteriology, University of California at Los Angeles.

3. Studies on the inhibition of some transplantable rat tumors by guinea pig serum. H. Ainis and E. Jameson, Department of Bacteriology and Department of Medicine, University of Southern California, Los Angeles.

4. A comparison of serologic tests for syphilis employing antigens prepared from *Treponema pallidum*. J. N. Miller, R. A. Book, and C. M. Carpenter, Department of Infectious Diseases, University of California Medical Center, Los Angeles.

5. A microscopic study of mycobacteria infected with D-32 phage. K. Fukai and M. I. Sellers, Department of Infectious Diseases, University of California Medical Center, Los Angeles.

6. Bacteriologic studies in the planning of the new marine sewage outfall for the City of Los Angeles. S. C. Rittenberg, T. Mittwer, and D. Ivler, Department of Bacteriology, University of Southern California, Los Angeles.

Northern California and Hawaii Branch

(J. L. Stokes, Secretary-Treasurer)

December 13, 1957, University of California, Davis, California.

1. Studies on the role of tuberculin hypersensitivity in immunity to tuberculosis. David W. Weiss, Department of Bacteriology, University of California, Berkeley.

2. Polypectate media for detection of pectinolytic bacteria. R. H. Vaughn, G. K. York II, C. W. Nagell, M. M. Mitchell, and H. Ng., Department of Food Technology, University of California, Davis.

3. Dwarf colony mutants of Salmonella. J. L. Stokes and H. G. Bayne, Western Regional Laboratory, Albany.

4. The isolation and characterization of a methanogenic bacterium from the rumen. P. H. Smith and R. E. Hungate, Department of Bacteriology, University of California, Davis.

5. Microbial decomposition of acetylenic compounds. Kjell Eimhjellen, Hopkins Marine Station, Pacific Grove.

6. The microbial decomposition of cellulose. Michael Jermyn, Department of Bacteriology, University of California, Berkeley.

7. Some observations on the biosynthesis of carotenoids in *Rhodospirillum rubrum*. Germaine Cohen-Bazire and Synnøve Jensen, Department of Bacteriology, University of California, Berkeley.

At the dinner meeting Dr. R. E. Hungate described his experiences on his trip to Africa in mid-1957.

Connecticut Valley Branch (Elizabeth D. Robinton, Secretary-Treasurer)

December 6, 1957, St. Joseph's College, West Hartford, Connecticut.

1. The effect of beta Propriolactone on the antigenicity of *Salmonella typhimurium*. Carolmarie Smith, Neil L. Norcross, and R. B. Read, Jr., University of Massachusetts.

2. The effect of antiphage serum on the virulence of *C. diphtheriae*. Paul S. Anderson, Jr., Yale University.

3. Effect of chick embryo on the mouse LD_{50} titer of the 17D strains of yellow fever virus. Ray Dutcher, University of Massachusetts.

4. Movie: "A Career in Bacteriology".

Indiana Branch (Walter A. Konetzka, Secretary-Treasurer)

October 18, 1957, De Pauw University, Greencastle, Indiana.

A joint meeting was held with the Bacteriology Section of the Indiana Academy of Science. George F. Reddish of the Warner Lambert Pharmaceutical Company gave the principal address on "Present Trends Relating to Antiseptics, Disinfectants and Sterilization."

1. Bovine orphan viruses. Louis Estella, Pitman-Moore Co., Indianapolis.

2. The metabolic origin of D-leucine in circulin. E. J. Kirsch, Henry Koffler, and P. A. Tetrault, Purdue University.

3. The effect of formalin treatment on the agglutination of red cells by antiserum against

artificially attached antigens. J. S. Ingraham, Indiana University Medical Center.

4. Ultra-violet sensitivity of *Streptomyces* species. T. C. Nelson, Eli Lilly Company, Indianapolis.

5. Bacteriological problems in foods. Glen Weber, Indiana State Board of Health.

6. Studies of antibiotic resistance of staphylococci isolated from hospital patients and outpatients. R. S. Griffith, W. S. Boniece, J. M. McGuire, R. M. Wolfe, M. Joiner, W. E. Wick, and D. H. Holmes, Lilly Research Laboratory, Indianapolis General Hospital.

7. An improved combination of optical instruments useful in the bacteriological and biological laboratory. P. S. Prickett, E. F. Harrison, H. R. Williams, Jr., and H. L. Murray, Mead Johnson Co., Evansville.

Intermountain Branch (Paul B. Carter, Secretary)

November 23, 1957, University of Utah, Salt Lake City, Utah. (Twenty-first semiannual meeting.)

1. Human skin test reactions with *H. capsulatum* and *B. dermatitidis* polysaccharides. Ralph A. Knight, Steve Coray, and Stanley Marcus, Department of Bacteriology, University of Utah.

2. A comparison of two types of T.B. media (a modified ATS and 7H9). Merle Selin and H. W. Harris, Ft. Douglas Veterans Hospital.

3. An *in vitro* system for demonstration of cell activity. Gottlieb Schneebeli, Department of Anatomy, University of Utah.

4. The current status of immunization. A panel discussion. L. P. Gebhardt, Department of Bacteriology, University of Utah (Mod.); Paul Hoeprich, Department of Medicine, University of Utah; Garth G. Myers, Department of Pediatrics, University of Utah; J. P. Kesler, Utah State Health Department.

5. "A Career in Bacteriology"—Movie.

6. Physiological effects of virus yellows infection in beet plants. John Spikes, Department of Experimental Biology, University of Utah.

7. Relationship of onset of bacteremia in the X-irradiated animal to decreased serum bactericidal activity: A comparative study. Eugene H. Perkins, Bert D. Thorpe and Stanley Marcus, Department of Bacteriology, University of Utah.

8. Studies on the properdin system. Fred Miya, Eugene H. Perkins, Bert D. Thorpe and Stanley Marcus, Department of Bacteriology, University of Utah.

9. Quantitative basis of bacterial pyrogenicity. Carl Anselmo and Stanley Marcus, Department of Bacteriology, University of Utah.

10. Persistence of *K. pneumoniae* polysaccharide in blood plasma of the guinea pig. Russell S. Jones, Yolande Mayne, and E. Virgil Howell, Department of Pathology, University of Utah.

11. A disease of fingerling trout. E. Roylance Martin and L. P. Gebhardt, Department of Bacteriology, University of Utah.

12. Nature of resistance in mouse histoplasmosis. Gilbert A. Hill and Stanley Marcus, Department of Bacteriology, University of Utah.

13. Evaluation of two methods of sterilization of arterio-homografts. John Lowry, Department of Pathology, Dee Hospital, Ogden, Utah.

14. Enzyme studies with tissue culture virus systems. Frank Deig and John G. Bachtold, Department of Bacteriology, University of Utah.

15. Preliminary studies on the desoxyribonuclease and ribonuclease in rabbit peritoneal phagocytes. James Whitesides, Beverly S. Orton, and David M. Donaldson, Department of Bacteriology, Brigham Young University.

Kentucky-Tennessee Branch (Ilda McVeigh, Secretary-Treasurer)

November 1–2, 1957, University of Kentucky, Lexington, Kentucky.

1. The *in vitro* sensitivity of leukocytes from allergic and non-allergic subjects to products of growth of pathogenic cocci. H. E. Hall and M. Scherago, Department of Bacteriology, University of Kentucky, Lexington, Kentucky.

2. Physiological properties of streptococci isolated from plants. J. Orvin Mundt and A. H. Johnson, Department of Bacteriology, University of Tennessee, Knoxville, Tennessee.

3. Soluble hemolysins of vibrios. Pinghui V. Liu, Department of Microbiology, School of Medicine, University of Louisville, Louisville, Kentucky.

4. A strain of *Escherichia coli* which lacks the ability to produce gas from carbon compounds. Ilda McVeigh, Department of Biology, Vanderbilt University, Nashville, Tennessee.

5. Some morphological features of *Nocardia*. O. F. Edwards and Margaret Hotchkiss, Department of Bacteriology, University of Kentucky, and Keenland Electron Microscope Laboratory, Lexington, Kentucky.

6. The life cycle of *Nocardia asteroides* as shown by micro cultures. Barbara B. Young and Margaret Hotchkiss, Department of Bacteriology, University of Kentucky, Lexington, Kentucky.

7. The effect of various alkali halides upon survival of *Escherichia coli* at +2°C and −9°C. Mary Lou Abell, Department of Biology, Vanderbilt University, Nashville, Tennessee.

8. Radiation studies on synchronous cultures of *Escherichia coli*. G. E. Stapleton and N. A. Sicard, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

9. Uricolytic activity in *Aerobacter* spp. and its possible relationship to the growth response of chickens to dietary antibiotics. Ralph F. Wiseman, Department of Bacteriology, University of Kentucky, Lexington, Kentucky.

10. The preparation of viable suspensions of clostridia. Leo Kaufman and R. H. Weaver, Department of Bacteriology, University of Kentucky, Lexington, Kentucky.

11. The effect of gas-liquid interfaces on the survival of bacterial cells at +2°C in 4.6 M. NaCl. Henry Reeves, Department of Biology, Vanderbilt University, Nashville, Tennessee.

12. The effect of infection by *Pseudomonas phaseolicola* upon the respiration of the radicle of the green bean. Charles D. Jeffries, Elmo S. Dooley, and Gordon E. Hunt, Departments of Bacteriology and Botany, University of Tennessee, Knoxville, Tennessee.

13. An after effect of ionizing radiation on a mutant of *Escherichia coli*. H. I. Adler, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

14. Cultivation of *Trichomonas vaginalis*, Donne, 1837 in association with tissue cultures. Emil Kotcher and Alicia C. Hoogasian, Department of Microbiology, School of Medicine, University of Louisville, Louisville, Kentucky.

15. A comparison of microbial endotoxins by infrared spectroscopy. J. A. Cameron and D. Frank Holtman, Department of Bacteriology, University of Tennessee, Knoxville, Tennessee.

16. The effect of calcium and ether extract on *in vivo* rumen microbic celluloytic activity. R. B. Grainger, F. H. Baker and J. W. Stroud, Department of Animal Husbandry, University of Kentucky, Lexington, Kentucky.

17. Results of the routine use of the catalase and peroxidase tests of cultures of mycobacteria isolated from patients in a tuberculosis hospital. E. H. Gerlach, Tennessee Tuberculosis Hospital, Chattanooga, Tennessee.

Maryland Branch (Regina Schneider, Secretary-Treasurer)

November 21, 1957, Baltimore Yacht Club, Middle River, Maryland.

Dr. Paul A. Rhode, B.B.L., Baltimore, showed the movie "A Career in Bacteriology", which was produced at Indiana University. Later, Col. W. C. Eveland, Walter Reed Army Medical Center, spoke on "The Present Status of the Use of the Fluorescent Antibody Technique in Diagnosis and Research."

December 13, 1957, Alpine Villa, Baltimore, Md.

At this annual Christmas meeting new officers were elected; then the members and guests were entertained by a magic show.

January 27, 1958, Johns Hopkins University, Baltimore, Md.

Dr. Leon Jacobs, National Institute of Allergy and Infectious Diseases, spoke on "Toxoplasmosis."

Michigan Branch (Elizabeth J. Cope, Secretary-Treasurer)

December 7, 1957, Whittier Hotel, Detroit, Michigan.

1. The correlation of coliform count with the deterioration of cutting oils. Harold Rossmore, Wayne State University.

2. Some factors affecting the pathogenesis of *Trichomonas vaginalis* and *Trichomonas foetus*. Rhoda M. Michaels, Research Division, The Upjohn Company.

3. Rate of acid formation by *Lactobacillus delbrueckii* as a function of viable cell population. Ronald E. West, George T. Tsao, and Lloyd L. Kempe, Bacteriology Department, University of Michigan.

4. ECHO 9 Virus in Michigan. Donald E. Craig, School of Public Health, University of Michigan.

5. The viral spectrum of chick embryo kidney cells in tissue culture. Bruce S. Wright and Bernard P. Sagik, Research Division, The Upjohn Company.

6. Protein and nucleic acid synthesis in tissue cultures as a function of X-radiation. Martha R. Sheek and Wayne E. Magee, Research Division, The Upjohn Company.

7. *Special address*. Sanitary Conditions in the Near East: Report of a Recent WHO Survey by W. L. Mallman, Michigan State University.

8. Beta-propiolactone for the sterilization of serum in tissue culture medium. Richard Eidam, Judy Truden, and Gerald LoGrippo, Division of Microbiology, Henry Ford Hospital.

9. Antitumor properties of some seed extracts. Richard Haines, Bacteriology Department, University of Michigan.

Eastern Missouri Branch (Alex C. Sonnenwirth, Secretary-Treasurer)

October 29, 1957, Wohl Health Center, St. Louis, Missouri.

1. Quantitative studies of toxoplasma in tissue culture monolayers. S. D. Chaparas, Department of Microbiology, St. Louis University School of Medicine.

2. Agglutination and lysis of erythrocytes by lysozyme. James T. Barrett, Department of Microbiology, University of Missouri School of Medicine.

December 7, 1957, Jewish Hospital, St. Louis, Missouri.

1. Host-parasite relationship using bacteriophage in vivo. Robert Keller, Department of Microbiology, University of Missouri, School of Medicine, Columbia, Missouri.

2. Salmonella typing at the Missouri Division of Health Laboratories. Al Novick, State Division of Health Labs., Jefferson City, Missouri.

3. Nutritional requirements of staphylococci in relation to coagulase production. H. Tamimi, Department of Bacteriology, School of Dentistry, Washington University.

4. The findings of a preliminary parasitological survey in Central Missouri. Michael Ivey, Department of Microbiology, University of Missouri, School of Medicine, Columbia, Missouri.

New Jersey Branch (Frederick C. Kull, Secretary)

November 20, 1957, Ethicon, Inc., Somerville, New Jersey.

Dr. Vernon Bryson, Institute of Microbiology, New Brunswick, New Jersey, was Chairman of a symposium concerned with "Radiation Effects on Microorganisms". Other speakers and their topics were:

1. Influence of post irradiation metabolism on induced mutation in bacteria. Evelyn M. Witkin, College of Medicine, State University of New York, Brooklyn, New York.

2. Photoreactivation and its significance in microbiology. Albert Kelner, Brandeis University, Waltham, Massachusetts.

December 19, 1957, Institute of Microbiology, Rutgers University, New Brunswick, New Jersey. (Papers by young investigators.)

1. Relationship between penicillin resistance and serum sensitivity in bacteria. Jacob G. Michael, Institute of Microbiology.

2. The use of mycostatin in the control of fungal spoilage of orchids. Eleanora Frank, E. R. Squibb & Sons.

3. DNA synthesis and population changes in pneumococcus. William Firshein, Institute of Microbiology.

4. Some observations on the mammalian cell in suspended cell culture. Fred E. Giardinello, E. R. Squibb & Sons.

January 23, 1958, E. R. Squibb and Sons, New Brunswick, New Jersey.

Symposium: Microbiological Studies on Tumors.

1. Introductory remarks. Chairman William Gold, Bzura Inc., Keyport, N. J.

2. Study of viruses as oncolytic agents. Alice E. Moore, Sloan Kettering Foundation, New York, N. Y.

3. Viruses as causative agents of some tumors. Frank J. Rauscher, Institute of Microbiology, Rutgers University, New Brunswick, N. J.

February 20, 1958, Merck & Co., Inc., Rahway, New Jersey.

Symposium: "Natural Resistance of Animals and Plants to Infectious Agents."

Convener: Werner Braun, Institute of Microbiology.

Discussants: L. Joe Berry, Bryn Mawr College, Bryn Mawr, Pennsylvania; James Hirsch, Rockefeller Institute, N. Y. C.; David Davis, Merck and Co.

New York City Branch (J. S. Kiser, Secretary)

January 16, 1958, Hotel Statler, New York City.

Luncheon address: "The Strategy and Evaluation of Research". Vernon Bryson, Institute of Microbiology, Rutgers University, New Brunswick, N. J.

Section A (Gladys L. Hobby, Presiding)

1. Influence of cells and alum on staphylococcal antibody production. Olive Durfee and Murray S. Cooper, Lederle Laboratories Div., American Cyanamid Company, Pearl River, N. Y.

2. The production of antibody during the course of sensitization to picryl chloride. Charles W. Johnson, The Rockefeller Institute for Medical Research.

3. Experiences with an epizootic infection in tumor bearing mice. William T. Bradner and Donald A. Clarke, The Sloan-Kettering Institute for Cancer Research.

4. Studies relating to the submerged culture of the mammalian cell. D. W. Ziegler, W. F. McLimans and E. V. Davis, University of Pennsylvania, Philadelphia, Penn.

5. Fluorescence of botulinum toxin and its relation to toxicity. Daniel A. Boroff and John E. Fitzgerald, New England Institute for Medical Research, Ridgefield, Conn.

6. Chemotherapeutic activity of thiocarbanilide (SU1906), thiazoline (SU3068), and other antituberculous agents upon photochromogenic mycobacteria. E. A. Konopka, R. L. Mayer, P. C. Eisman and T. A. Gisi, CIBA Pharmaceutical Products, Inc., Summit, N. J.

7. Staphylococcus infections in nurseries for the newborn. Sidney Goldberg, Leon Buchbinder and Jan Swan, N. Y. City Dept. of Health.

8. Increased resistance to antibiotics among the microorganisms isolated in a general hospital in 1956/7. Alfred J. Weil, Bronx Hospital.

Section B (Harry P. Broquist, Presiding)

1. Possible nutritional transmethylation in a thermophile. H. Baker, S. H. Hutner, H. A. Nathan, I. Pasher and H. Sobotka, Mt. Sinai Hospital and Haskins Laboratories.

2. The growth of *Streptococcus faecalis* in the Jouan biophotometer. M. Katharine Cultas and Dorris J. Hutchison, The Sloan-Kettering Institute for Cancer Research.

3. Relationship between oxidative metabolism and germination in spores of aerobic bacilli. Brooks D. Church, Warner-Lambert Pharmaceutical Co., Morris Plains, N. J.

4. Metabolism in *Neurospora crassa*. D. V. Siva Sankar, Adelphia College, Garden City.

5. On the action of antihistamines on a ciliate. M. Sanders and H. A. Nathan, Haskins Laboratories.

6. Mechanism of action of the drug pyrimethamine. Robert C. Wood and George H. Hitchings, Wellcome Research Laboratories, Tuckahoe, N. Y.

7. Inhibition of certain metabolic activities in the growth of *Pseudomonas aeruginosa* by a synthetic hexahydropyrimidine. James F. Martin and Brooks D. Church, Warner-Lambert Pharmaceutical Co., Morris Plains, N. J.

8. Preliminary study of an extracellular polysaccharide from gelatinous strains of *Chromobacterium violaceum*. William A. Corpe, Barnard College, Columbia University.

Central New York Branch (Landon E. Bowers, Secretary-Treasurer)

November 9, 1957, Geneva, New York.

1. Growth and autotrophic metabolism of *Nitrosomonas europaea*. M. S. Engel and M. Alexander, Laboratory of Soil Microbiology, Department of Agronomy, Cornell University, Ithaca, N. Y.

2. Effect of cortisone on the growth of psittacosis virus in embryonated eggs. Robert B. Stewart, Department of Bacteriology, School of Medicine and Dentistry, University of Rochester.

3. Carbohydrate metabolism in *Hansenula anomala*. Hamilton Niss, Department of Bacteriology and Botany, Syracuse University.

4. Significance of lysogenic rhizobium in the soil. K. C. Marshall, Laboratory of Soil Microbiology, Department of Agronomy, Cornell University, Ithaca, N. Y.

5. Diacetyl production by the heterofermentative lactic acid bacteria. M. D. Christensen, Department of Food Science and Technology, New York State Agricultural Experiment Station, Geneva, N. Y.

6. Growth of viruses in Rous sarcoma tissue *in vitro*. George A. Nankervis, Department of Bacteriology, School of Medicine and Dentistry, University of Rochester.

7. Effects of glucose and glucose degradation products on the growth of *Clostridium botulinum*. Landon Bowers, Department of Bacteriology and Botany, Syracuse University.

North Carolina Branch (Mary Poston, Secretary-Treasurer)

December 7, 1957, Bowman Gray School of Medicine, Winston Salem, N. C.

1. Isolation of auxotropic mutants by means of membrane filter. William Bibb and W. R. Straughn, University of North Carolina School of Medicine, Chapel Hill.

2. Immunogenic considerations of several anti-tuberculosis vaccines. H. Mac Vandiviere, Gravely Sanatorium, Chapel Hill.

3. The effects of extended incubation on the propagability of tubercle bacilli and their susceptibility to anti-tuberculous drugs. H. E. Kennedy, Gravely Sanatorium, Chapel Hill.

4. The study of some of the biochemical properties of *Vibrio fetus* and other related vibrios isolated from animals. James G. Lecce, Department of Animal Industry, North Carolina State College, Raleigh.

5. The influence of re-using chill tank slush ice on the market quality of eviscerated broilers. Daniel Fromm and R. J. Monroe, Department of Poultry Science, North Carolina State College, Raleigh.

Dr. Arthur Silverstein, Walter Reed Institute of Pathology, U. S. Army, Washington, D. C., addressed the dinner meeting on "Fluorescent Antibody".

Ohio Branch (C. I. Randles, Secretary-Treasurer)

October 26, 1957, Ohio State University, Columbus, Ohio.

1. The production of anti-lung substances by altered tissue antigens. R. G. Burrell and M. S. Rheins, Department of Bacteriology, The Ohio State University, Columbus, Ohio.

2. Effect of steroids on the proliferation of uterine fibroblasts. B. I. Grosser and H. E. Swim, Department of Microbiology, School of Medicine, Western Reserve University, Cleveland, Ohio.

3. Influence of antibiotic feeding on the keeping quality and antibiotic content of poultry products. Grace R. Frye, H. H. Weiser and A. P. Winter, Departments of Bacteriology and Poultry Science, The Ohio State University, Columbus, Ohio.

4. Purification of M protein on carboxymethyl cellulose columns. Douglas Gillespie and L. O. Krampitz, Department of Microbiology, School of Medicine, Western Reserve University, Cleveland, Ohio.

5. Induction of penicillinase production in staphylococci by bacteriophage. Harry L. Ritz and J. N. Baldwin, Department of Bacteriology, The Ohio State University, Columbus, Ohio.

6. Reactions of eleven IMViC types of coliforms in a modified EC test at 45°C incubation. R. H. Bordner, Water Supply and Pollution Program, Robert A. Taft Sanitary Engineering Center, Public Health Service, Cincinnati, Ohio.

7. Containers, refrigerants and insulation for split milk samples. C. B. Donnelly, L. A. Black and K. H. Lewis, Milk and Food Research, Robert A. Taft Sanitary Engineering Center, Public Health Service, Cincinnati, Ohio.

8. Determination of Coxsackie and ECHO virus infections in Ohio. C. C. Croft and G. R. Anderson, Division of Laboratories, Ohio Department of Health.

9. The use of tissue culture methods for isolating viruses from swine. B. B. Hancock, E. H. Bohl and J. M. Birkeland, Department of Bacteriology, Ohio State University, Columbus, Ohio.

10. Staphylococcal bacteriophage types in Ohio, 1957. Berttina B. Wentworth and Marilyn M. Mattern, Division of Laboratories, Ohio Department of Health.

11. The immune response of rabbits to injection of homologous and heterologous corneal tissue. W. B. Wacker and M. C. Dodd, The Ohio State University, Columbis, Ohio.

12. Alcohol as a disinfectant. J. V. Lawrence, Department of Zoology, Ohio University, Athens, Ohio.

Eastern Pennsylvania Branch (Elizabeth Fowler, Secretary-Treasurer)

November 26, 1957, University of Pennsylvania, Philadelphia, Pennsylvania.

1. Specific release of heterogenic mononucleosis receptor by influenza virus and plant proteases: serological and immunochemical implications. Georg F. Springer and Abram Kaplan, Pepper Laboratory of Clinical Medicine, University of Pennsylvania.

2. Studies on the nucleic acids of poliomyelitis infected HeLa cells. E. L. Rothstein and L. A. Manson, Section on Microbiology in Medicine, Department of Medicine and Wistar Institute, University of Pennsylvania.

3. Human skin-fixing blocking type antibody. N. C. Balczuk and J. A. Flick, Department of Microbiology, University of Pennsylvania.

January 28, 1958, University of Pennsylvania, Philadelphia, Pennsylvania.

Dwight B. McNair Scott, Division of Cytology and Genetics, School of Medicine, University of Pennsylvania, presided at a symposium on "Microbiology and Cancer Research." Following are the speakers:

1. Biosynthetic control in microorganisms. Joseph S. Gots, Department of Microbiology, School of Medicine, University of Pennsylvania.

2. Microbiological screening of potential anticancer agents. M. L. Rogers, Division of Cytology and Genetics, School of Medicine, University of Pennsylvania.

3. Chemistry of homo-fermentative growth. Gerrit Toennies, Institute for Cancer Research and the Lankenau Hospital.

4. Problems of lymphomatosis. Vittorio Defendi, The Wistar Institute, University of Pennsylvania.

February 25, 1958, University of Pennsylvania, Philadelphia, Pa.

Panel discussion: "Changing Horizons in Medical Microbiology, 1900–1965."

Moderator: Morton Klein, Temple University School of Medicine.

1. How we have come to where we are. Stuart Mudd, Department of Medical Microbiology, University of Pennsylvania.

2. The foreseeable future—panel discussion: Seymour S. Cohen, Dept. of Biochemistry, School of Medicine, U. of Pennsylvania; Kenneth Goodner, Dept. of Bacteriology, Jefferson Medical School; Joseph S. Gots, Dept. of Microbiology, School of Medicine, U. of Pennsylvania; Max B. Lurie, Henry Phipps Institute; Robert I. Wise, Jefferson Medical College.

Rio de Janeiro Branch (Laerte de Andrade, Secretary-Treasurer)

December 4, 1957, Brazilian Press Association Building, Rio de Janeiro.

1. Influence of yellow and blue light on bacterial virulence. Niber da Paz M. da Silva, Arlete Ubatuba and Genesio Pacheco, Instituto Oswaldo Cruz, Rio de Janeiro, Brazil.

2. Influence of silicate on the growth of *Mycobacterium tuberculosis*. Pedro Fontana, Jr. and Laerte de Andrade, Instituto Oswaldo Cruz, Rio de Janeiro, Brazil.

3. Differentiation of *Listeria monocytogenes* and *Erysipelothrix rhusiopathiae* with dyes. Vinicius Moreira Dias and Leoncio Andrade Corral, Instituto Oswaldo Cruz, Rio de Janeiro, Brazil.

South Central Branch (R. J. Strawinski, Secretary-Treasurer)

November 22, 1957, New Orleans, Louisiana.

A dinner meeting was addressed by Wayne W. Umbreit, Associate Director of the Merck Institute for Therapeutic Research. His subject was "From Bacteriology to Behaviour".

November 23, 1957, Tulane University, School of Medicine, New Orleans, Louisiana.

1. Microbial metabolism of methane. Lewis R. Brown and R. J. Strawinski, Department of Bacteriology, Louisiana State University, Baton Rouge, La.

2. Serologic studies in the genus *Nocardia*. J. Donald Schneidau, Department of Microbiology, Tulane University School of Medicine, New Orleans, La.

3. Thermal inactivation characteristics of antibodies in bovine milk. V. W. Greene, Department of Bacteriology, Southwestern Louisiana Institute, Lafayette, La., J. J. Jezeski and J. C. Olson, Jr., Department of Dairy Science, University of Minnesota, Minneapolis, Minn.

4. Giant colony patterns of *Pseudomonas myxogenes*. George H. Bornside, Department of Surgery, Louisiana State University School of Medicine, New Orleans, La., and Robert L. Richardson, Department of Bacteriology, State University of Iowa, Iowa City, Ia.

5. Antibody response of the Canada goose to the Newcastle disease virus. Calvin A. Page, Department of Bacteriology, Southwestern Louisiana Institute, Lafayette, La.

6. Adsorption of purified blood-group A and B substances onto human red blood cells. Maria Hornung and Harold Baer, Department of Microbiology, Tulane University School of Medicine, New Orleans, La.

7. Some facets of microbial naphthalene oxidation. R. E. Klausmeier and R. J. Strawinski, Department of Bacteriology, Louisiana State University, Baton Rouge, La.

8. Leptospirosis research at Louisiana State University. E. E. Roth, B. Khieriem, and K. Olson, Department of Veterinary Science, Agriculture Experiment Station, Louisiana State University, Baton Rouge, La.

9. Studies on monkey kidney culture cytopathogenic agents isolated from the feces of individuals with polio-like illnesses, 1955. Louis Potash, Department of Epidemiology, Tulane University School of Medicine, New Orleans, La.

10. Proteolytic enzymes produced by *Pseudomonas aeruginosa*. Earl Fisher, Jr., Departments of Ophthalmology and Microbiology, Tulane University School of Medicine, New Orleans, La.

11. Intermediary metabolism of propane and butane. Edmund N. Benes, Lewis R. Brown, R. E. Klausmeier, and R. J. Strawinski, Department of Bacteriology, Louisiana State University, Baton Rouge, La.

12. Behavior and characteristics of Asian influenza virus. Barbara Holmes, Marjory Coffman, William Pelon, and William Mogabgab, Department of Medicine, Tulane University School of Medicine, New Orleans, La.

Southeastern Branch (Alice Brim, Secretary-Treasurer)

October 4, 1957, Alfriend Hall, St. John's Episcopal Church, Tallahassee, Florida.

1. Some aspects of the isolation of nitrifying bacteria. Warren S. Silver, Department of Bacteriology, University of Florida, Gainesville, Florida.

2. Effect of carbonated beverages on bacteria. R. G. Eagon and C. R. Green, Department of Bacteriology, University of Georgia, Athens, Ga.

3. A further study of the properties of an Alpha-glucosidase of yeast. Bertie Pittman and Loretta C. Ellias, Division of Bacteriology, Florida State University, Tallahassee, Florida.

4. Metabolism of 2-Desoxyglucose by *Pseudomonas aeruginosa*. A. K. Williams and R. G. Eagon, Department of Bacteriology, University of Georgia, Athens, Ga.

5. Uronic acid utilization by marine bacteria from the waters of Sapelo Island, Georgia. R. M. Cody and W. J. Payne, Department of Bacteriology, University of Georgia, Athens, Ga.

6. Observations on the preparation and use of human amnion cultures in virus studies. Robert D. Francis and Dorothy E. Curtright, University of Alabama Medical Center, Birmingham, Alabama.

7. A study of atypical acid-fast organisms isolated from patients suspected of having tuberculosis. Elizabeth McAlister and Robert Cacciatore, Central Laboratory, S. W. Florida T. B. Hospital, Tampa, Florida.

8. Infant meningitis caused by an unidentified gram negative rod. Elizabeth O. King and Helen Morre, Communicable Disease Center, Diagnostic Bacteriology Unit, Chamblee, Ga.

9. Cultural and biochemical characteristics of *Corynebacgerium* spp. isolated from milk from normal bovine udders. Frederick W. Bennett, Dairy Department, University of Georgia, Athens, Ga.

10. Serological studies on *Corynebacterium* spp. isolated from milk from normal bovine udders. John W. Foster and Frederick W. Bennett, Department of Microbiology and Preventive Medicine, University of Georgia, Athens, Ga.

11. Dinner address: "The Disappearance of Malaria in the Southeastern United States", by Mark F. Boyd, former Director, Rockefeller Foundation Malarial Research Laboratory, Tallahassee, Florida.

October 5, 1957, Alfriend Hall, St. John's Episcopal Church, Tallahassee, Florida.

1. The properties of adenosine deaminase in, extracts of *E. coli*. G. E. Vallee and A. L. Koch Department of Biochemistry, College of Medicine, University of Florida, Gainesville, Florida.

2. The properties of adenosine deaminase in growing cultures of *E. coli*. R. J. Mans and A. L. Koch, Department of Biochemistry, College of Medicine, University of Florida, Gainesville, Florida.

3. Film strip on the isolation and identification of Beta-hemolytic streptococci. (Followed by a general discussion on steptococci.) Elaine L. Updyke, Streptococcus and Staphylococcus Unit, Communicable Disease Center, Chamblee, Georgia.

4. Experience with killed duck egg vaccine against rabies. (Followed by a general discussion on rabies.) Thomas Hosty, Alabama State Board of Health, Montgomery, Alabama.

Texas Branch (Capt. Irving Davis, Secretary-Treasurer)

November 22–23, 1957, Trinity University, San Antonio, Texas.

1. Arginine degradation by *Micrococcaceae.* W. M. Sellers and J. A. Kooistra, USAF School of Aviation Medicine, Randolph Field.

2. Enteric infections occurring in Rheusus monkeys by *Shigella flexneri* resistant to normal antibiotic therapy. C. E. Craft and R. B. Mitchell, USAF School of Aviation Medicine, Randolph Field.

3. Experience with the zymosan assay of properdin. R. A. Finkelstein, L. M. Roch and S. E. Sulkin, The University of Texas Southwestern Medical School, Dallas, Texas.

4. Inactivation of the herpes virus by the properdin system. R. A. Finklestein, R. Allen and S. E. Sulin, The University of Texas Southwestern Medical School, Dallas, Texas.

5. Effects of *Hemophilus pertussis* vaccine on anaphylaxis in mice. W. E. Harris and J. D. Fulton, USAF School of Aviation Medicine, Randolph Field.

6. Characteristics of ozone activity against *Escherichia coli.* I. Davis, USAF School of Aviation Medicine, Randolph Field.

7. Some microbiological aspects of pendulous crop in turkey poults. H. O. Wheeler, R. H. Rigdon, T. M. Ferguson, B. L. Reid and J. R. Couch, Texas A. & M., College Station, and The University of Texas Medical Branch, Galveston, Texas.

8. Mixtures of coagulase positive staphylococci from clinical sources. E. D. Rosenblum and J. L. W. Jackson, The University of Texas Southwestern Medical School, Dallas, Texas.

9. Effect of cortisone injections on complement titers in guinea pigs. L. Renshaw and R. K. Guthrie, North Texas State College, Denton, Texas.

10. Evidence of viral lipotropism in bat rabies. S. E. Sulkin, P. H. Krutzsch, C. Wallis and Chansoo Kim, The University of Texas Southwestern Medical School, Dallas, Texas.

11. The relationships of growth media composition and methods of treating antigens of rough and rho strains of *Vibro cholera* to their agglutinability in antisera prepared against smooth strains. S. T. Lyles, Texas Christian University, Ft. Worth, and E. W. Gardner, Jr., The University of Texas, Austin.

12. Growth studies on the cotton root rot fungus, *Phymatotrichum omnivorum.* I. The effect of hydrogen-ion concentration and oxygen in liquid culture. R. J. Hervey, Texas Agricultural Experiment Station, Temple.

13. Schick test and serum antitoxin relationships in young adults. V. T. Schuhardt, The University of Texas, Austin.

14. Recent laboratory findings on epidemic influenza. J. E. Grimes, A. Canales, and T. D. Sullivan, State of Texas Department of Health, Austin.

15. Preliminary study of the effects of X-irradiation on the antibody combining capacity of human proteins. W. G. Glenn and I. Marable, USAF School of Aviation Medicine, Randolph Field.

16. Screening antibiotically active filtrates for synergism with anti-tumor substances. C. P. Lowry and J. W. Foster, The University of Texas, Austin.

17. Ornithosis of turkeys, 25 minute movie narrated by D. E. Davis, Texas Agricultural Experiment Station, College Station.

18. Studies on turkey ornithosis by means of fluorescein-labeled antibody. P. Donaldson, D. E. Davis, J. R. Watkins and S. E. Sulkin, The University of Texas Southwestern Medical School, Dallas, and Texas A. & M. College, College Station.

19. Direct hemagglutination of rabbit red blood cells by lymph node pus in cat scratch fever. C. D. Grabar, Surgical Research Unit, USA, Brooke Army Medical Center, Ft. Sam Houston.

20. Growth of *Mycobacterium paraffinicum* on Tween 80. R. L. Raymond and J. B. Davis, Field Research Laboratory, Magnolia Petroleum Company, Dallas.

21. Antibiotic resistance of staphylococci isolated from patients and presumably healthy students. C. E. Dowell, Jr. and S. T. Lyles, Texas Christian University, Ft. Worth and The University of Texas Southwestern Medical School, Dallas.

22. Recent laboratory findings on aseptic meningitis. C. R. Gabriel, T. D. Sullivan and J. V. Irons, State of Texas Department of Health, Austin.

23. Neutralizing antibodies following vaccination against rabies. Alice Conklin and J. V. Irons, State of Texas Department of Health, Austin.

24. Leaming deficit in rats induced by West Nile and Murray Valley encephalitis viruses. C. E. Duffy and O. D. Murphree, The University of Arkansas Medical Center, Little Rock, and Veterans Administration Hospital, North Little Rock.

25. The cytological response of embryonated eggs to normal and hepatitis infected mouse livers. B. A. Rubin and H. A. Kemp, Baylor University College of Medicine, Houston.

26. The stimulatory effect of egg yolk dialysate upon the growth of mycobacteria. J. O. Torman and R. P. Williams, Baylor University College of Medicine, Houston.

27. Demonstration of particulate-bound pig-

ment in *Serratia marcescens*. W. W. Taylor and R. P. Williams, Baylor University College of Medicine, Houston.

28. A water-soluble, diffusible pigment from a strain of *Serratia marcescens*. R. P. Williams, D. Hawkins, Jr., and W. W. Taylor, Baylor University College of Medicine, Houston.

29. Isolation of protoporphyrin IX from the catalase of *Micrococcus lysodeikticus*. S. Miller and R. P. Williams, Baylor University College of Medicine, Houston.

30. Stimulatory effect of caramelization of glucose on clostidium spore germination at 37°C. E. S. Wynne and L. I. Galyen, University of Texas, M. D. Anderson Hospital & Tumor Institute, Houston.

31. Variants of *Bacillus anthracis* produced by exposing spore-contaminated bonemeal to dry heat. R. D. Wende, Baylor University College of Medicine, Houston.

32. Antibodies for purified human plasminogen produced in the rabbit. W. M. Meyers, K. L. Burdon and Maxine N. Riley, Baylor University College of Medicine, Houston.

Washington Branch (Charlotte C. Campbell, Secretary-Treasurer)

January 28, 1958, Walter Reed Army Institute of Research, Washington, D. C.

1. A case of melioidosis.

Part I—Clinical aspects. Col. Hinton J. Baker, Psyche Wetmore, Eugene Blair and Sylvia Cary, Walter Reed Army Institute of Research.

Part II—Bacteriology. Col. Hinton J. Baker, Psyche Wetmore, Eugene Blair and Sylvia Cary, Walter Reed Army Institute of Research.

2. A proteolytic enzyme produced by monkey kidney in tissue culture. Robert A. Kramer, Division of Biologic Standards, National Institutes of Health.

3. Discussion of salaries of bacteriologists in the Federal Service. Leader: Roy C. Dawson.

BOOKS AND REVIEWS

Methods of Biochemical Analysis, Volume 5, David Glick, Editor, New York: Interscience Publishers, Inc., 1957, 502 pp., $9.50.

Textbook of Virology, A. J. Rhodes and C. E. van Rooyen, Baltimore: Williams and Wilkins Co., 1958, 642 pp., $10.00.

Research in Photosynthesis, Hans Gaffron and others, Editors, New York: Interscience Publishers, Inc., 1957, 524 pp., $12.00.

The Chemistry and Biology of Yeasts, A. H. Cook, Editor, New York: Academic Press, Inc., 1958, 762 pp., $22.00.

Methods in Enzymology, Volume IV, S. P. Colowick and N. O. Kaplan, Editors, New York: Academic Press, Inc., 1957, 979 pp., $24.00.

Yeasts, W. Roman, Editor, New York: Academic Press, Inc., 1957, 246 pp., $7.50.

Bergey's Manual of Determinative Bacteriology, 7th Edition, Breed, R. S., Murray, E. G. D., and Smith, N. R. Baltimore: The Williams and Wilkins Co., 1957, 1094 pp., $15.00.

By the time a book as widely known as *Bergey's Manual* enters its seventh edition the need to explain its purposes has long since passed. Rather it seems likely that bacteriologists, practically all of whom have come to find this book as essential as petri dishes, are more interested in how the seventh edition differs from the sixth.

Even a cursory examination shows that the *Manual's* contributors have been busy since 1946. Perhaps the most obvious change is a reduction in length from 1529 pages (sixth edition) to 1094. Let not the unwary fear that his favorite organisms were omitted, however. The book has simply been separated into two volumes. The first to appear, designated the seventh edition of *Bergey's Manual*, contains "an outlined classification of the bacteria and the description of the taxa from class to species and subspecies, together with the appropirate keys." The second volume, to be known as *Index Bergeyana*, will include inadequately described species, index to the literature, descriptions and citations to species formerly found as appendices, host and habitat index, and similar items.

As the preface to the 7th edition states, the general format of the *Manual* differs but little from that of the sixth edition. But changes in detail are many. Prominent among these is presentation of rickettsiae and viruses as orders comprising the class *Microtatobiotes* parallel to the familiar class *Schizomycetes*.

The number of orders in the class *Schizomycetes* has been increased from five to ten. Organisms with rigid cells, formerly included in three orders, are now distributed among seven. Numerous rearrangements also have been made within the orders and their sub-divisions.

No one reviewer, even with ample time to study the new edition, is qualified to say that the changes are good or bad. Certainly it would be more convenient if taxonomy and nomenclature could be stabilized. But they can't be, and we might as well

face it. As new organisms are discovered and as old ones are studied more, our ideas of a logical classification scheme are bound to change. The student who gets frustrated over alterations in the pattern of classification will simply have to bow to the inevitable. This new edition clearly represents progress and everyone, whether he agrees with the changes or not, will find it as useful as earlier editions. And as a distinct advantage, the seventh edition is considerably smaller and easier to handle than the sixth.

Your reviewer cannot resist the impulse to pass the good news to others of his generation that *Staphylococcus aureus* is back from limbo and has regained it's former position of respectability.

Bacterial Fermentations, H. A. Barker, New York: John Wiley and Sons, Inc., 1956. 95 pp.

This is the first in a series of small books based on the CIBA lectures in microbial biochemistry at the Institute of Microbiology of Rutgers University. The second, *Biochemistry of Some Peptide and Steroid Antibiotics* by E. P. Abraham, has appeared recently and succeeding ones of comparable scope may be expected to follow.

The title of this first booklet wants qualification: the "fermentations" are in the strict biochemical sense of the word and are three in number —methane formation, butyric acid-butanol production, and the anaerobic breakdown of nitrogenous compounds. In each of these classic fermentation types the research of H. A. Barker and his associates has prominently advanced the knowledge that he summarizes. Although the chemistry of the energy-yielding processes is emphasized, the equally challenging biology of isolation, nutrition, and classification is also treated in the section on the methane-producing bacteria. The three topics are presented succinctly, but in less than 100 small pages the author has succeeded in cramming the salient facts of his ferments.

PHILIPP GERHARDT

The Carbohydrates, Ward Pigman, Editor, New York: Academic Press, Inc., 1957, 902 pp., $20.00.

"The Carbohydrates", a revision of the earlier "Chemistry of the Carbohydrates" contains two new chapters covering photosynthesis and metabolism (Chapter 13) and nutritional aspects (Chapter 14).

Although 4500 references have been included in this volume, they represent only a small fraction of the actual carbohydrate literature and consequently the fullness of the treatment varies. The sugars and their derivatives are discussed in detail whereas such subjects as polysaccharides, which have been covered extensively in other monographs, have been condensed. References to more detailed treatments help to increase the coverage.

This volume covers the following topics: monosaccharides, esters, glycosides, simple acetals, thioacetals, polyols, acids and oxidation products, ethers, anhydrosugars, unsaturated derivatives, nitrogen derivatives, oligosaccharides, naturally occurring glycosides and glycosidases, identification and quantitative determination of carbohydrates, polysaccharides, photosynthesis, metabolism of carbohydrates and carbohydrates in nutrition. The two new chapters are treated somewhat superficially and may serve only to dilute the material of this book.

Although lack of details and a limited coverage of the more recent literature will limit the usefulness of this volume to carbohydrate chemists, it will serve as a helpful guide to workers in related biological fields. The author has closely followed the new rules on standardization of nomenclature which will aid in its use as a quick reference text. The price will certainly hinder the wide-spread use of this book as a text or reference, particularly to those who have previously purchased the earlier volume "The Carbohydrates".

J. D. DUERKSEN
HARLYN O. HALVORSON

Oral Microbiology and Infectious Disease, G. W. Burnet and H. W. Scherp, Baltimore: Williams and Wilkins Co., 1957, 589 pp., $11.00.

This book is the answer to the dental microbiologists' quest for a satisfactory text. It gives the student an introduction to infectious disease, and a dental approach to microbiology as it is related to the profession of dentistry.

These two well-qualified authors, with their wealth of knowledge of oral microbiology, have produced a well-organized text, which is inviting and readable covering the field in a general and uniform manner.

Each chapter begins with a quotation from a famous scientist pertinent to the material in that chapter. The type, large and clear, is arranged in two columns and is conducive to easy reading. The divisions of each chapter are in bold type with subdivisions in contrasting type. The names of the microorganisms are italicized. The photographs, tables, charts, structural formulas and illustrations are excellent, illustrating the principles of microbiology. The text is not repetitious in page or phrase. The style of writing is clear and interesting, giving evidence of careful and detailed research in its systematic preparation. It is an authoritative textbook; the authors make no attempt to evaluate controversial materials. They have eliminated archaic examples, substituting with facility the contemporary thinking available on a particular subject. The text is by no means over-simplified; it tends to stimulate the students' innate curiosity and to promote the use of reference readings. A cross checking of the references found the page

numbers to be accurate. The index is arranged in such a fashion as to make it possible for quick-reference to subject matter and related material. There is no conventional voluminous bibliography at the end of each chapter. Each chapter is followed by a list of additional readings.

The text is correlated effectively with oral pathology. This correlation gives the student an understanding of microbiology and pathology as they relate to dentistry. The authors emphasize this relationship frequently with a practical and realistic appeal to the student and teacher.

The book is divided into five sections.

(I) *The Origins, Development and Scope of Microbiology,* (36 Pages). In this section are discussed the historic theories of disease including a precise history of the development of oral microbiology.

(II) *Systematic Microbiology,* (99 pages). There are chapters in this section which deal with the taxonomy, cytology, physiology and metabolism of microorganisms. The two chapters on sterilization and chemotherapy are especially well done emphasizing the importance of these two subjects in dentistry.

(III) *Infection and Resistance,* (84 Pages). This section deals with transmission of disease, virulence and hypersensitivity. The subject of specific and nonspecific defense mechanisms of the body, an area in which the dentist should have a well founded comprehension and appreciation, are well covered.

(IV) *Oral Infections,* (174 pages). The authors have presented an excellent account of oral infections which embraces chapters on the microbial flora of the oral cavity and the nature of dental caries including the early theories relative to the etiology of and the organisms associated with dental caries. There is also a complete resumé of knowledge relative to periodontal disease, tooth pulp and periodical tissues, plus a consideration of bacterial, protozoan, viral and rickettsial diseases with oral manifestations.

(V) *Infectious Diseases,* (158 pages). This last section of the text deals entirely with infectious diseases and their causative agents. Each of these groups is treated briefly and concisely, citing the most pertinent information relative to the microbiology of the group and their oral implications.

This book should find wide acceptance as a useful teaching tool for a course in Oral Microbiology and Infectious Diseases, as a reference book for the general practitioner who wishes to be informed of current teaching concepts in this field, as a source of information for the clinician and diagnostician, for the casual reader who might desire general knowledge in the field of oral microbiology periodontal disease and as an edifying reference to any medical or dental library. Further, this book will be of value to the medical student and physician, since the authors have emphasized oral manifestations of infectious diseases, as well as systemic infections having their origin in the mouth. Of course, there are differences of opinion in the teaching of basic sciences to dental students; however, even those who do not agree with the authors entirely will find the volume worth reading.

The text should serve those interested in oral microbiology for some time to come until new materials, methods and information prompt a revision. To the reviewer, there is no noticeable weakness as a text and reference book for a course in Oral Microbiology. Students, as well as teachers, I am sure, are looking forward to the use of this fine text. The authors have produced a text worthy of dedication to a pioneer in the field of oral microbiology—Willoughby D. Miller—the Father of Oral Microbiology.

DONALD E. SHAY

Manual of Soil Fungi, Second Edition, J. C. Gilman, Ames, Iowa: Iowa State College Press, 1957, 450 pp., $7.50.

This useful book, which first appeared in 1945, has been revised and extended by the addition of 32 genera and over 140 species of fungi that have been isolated from soil in the last decade. During this period soil samples from many parts of the world have been plated out in the search for antibiotic producers, but rarely have such surveys found their way into the mycological literature. There are, in fact, only about 40 additional citations in the 2nd edition. The descriptions are, on the whole, adequate for tentative identifications; when in doubt, more detailed monographs can be consulted. There are numerous simplified line drawings and 13 plates showing details of fruiting bodies, spores, etc. of representative species. The basis of listing is geographical; actual distribution is not to be inferred. The true-soil inhabitants are probably far more widely distributed than the citations would indicate; conversely, some of the species included may well occur usually in more specialized habitats. No use is made of biochemical characters in identification other than the concession of describing the growth in specific substrates, which include such exotic media as licorice sticks, termite ants, and boiled hemp seed.

The continued demand for this book attests to its broad usefulness to those in many fields of work who have occasion to concern themselves with fungi in soil.

A. G. NORMAN

Zinsser's Bacteriology, Eleventh Edition, D. T. Smith, N. F. Conant, and Associates, New

York: Appleton-Century-Crofts, Inc., 1957, 953 pp. $12.00.

The eleventh edition of *Zinsser's Bacteriology* combines the attributes of an excellent reference with those of a working textbook. The authors have done an admirable job of keeping before students of microbiology one of the first and best textbooks on medical microbiology. Although a portion of the book includes information concerning the physiology and technical methods for study of microorganisms, most of the emphasis has been placed on microorganisms and their associations with disease.

Sections on bacterial physiology, immunology, and viruses have been rewritten and enlarged to encompass the vast amount of material which has been accumulating during the last few years. The information included on bacterial physiology is by no means as complete as that covering pathogenicity but serves merely as a general introduction to that area. Numerous excellent schematic representations, tables, and figures appear throughout the book.

A new chapter has been included on blood groups and immunohematology where the use of diagrams aids in explanation of the pathogenesis of Rh immunization and erythroblastosis fetalis.

The major portion of the book covers in detail pathogenic bacteria, spirochetes, the pleuropneumonia group of organisms, rickettsiae, diseases caused by small viruses, and a section on medical mycology. In addition, information about the susceptibility of microorganisms to the newer antibiotics has been presented.

This is an excellent text, not only for medical students, but also for students of microbiology.

JOHN E. FABER

Host-Parasite Relationships in Living Cells (A Symposium), Harriet M. Felton, Editor, Springfield, Illinois: Charles C. Thomas Co., 1957, 245 pp., $6.50.

This book records a symposium of eight "keynote" papers formally presented to stimulate thought, each followed by informal discussion; the symposium was concluded by a panel discussion to consider previously introduced concepts in the light of methodological limitations, for purposes of integration and indication of future investigation. Participants in the symposium made up a group of noted researchers from the East, West, Midwest and Southern United States, collectively representing morphological, biochemical and biological approaches to the study of host-parasite relationships. This symposium illustrates increasing recognition by biological scientists of the value of periodic conference to summarize and integrate, and is further evidence of the approaching maturity of biology in emphasizing synthetic as well as analytic concepts. Primary topics were chosen to emphasize key aspects of the structural and biochemical interrelationships of microbial parasitism, and of the mutual resistance between host and parasite. By orderly arrangement, the symposium was divided into two sections preceding the final integration: 1) a session on materials and methods, which by virtue of text and illustration, provided concise pictures of a) the architecture of animal and bacterial cells and viruses (Dempsey and Georgi), b) disease induced by animal viruses at the cellular level (Syverton), and c) host-parasite interaction as competitive physiologic activity (Hanks); 2) a session on current concepts which dealt with a) the combined morphological biological approach to animal host immunity and hypersensitivity, including clinical study of human disturbances of gamma globulin metabolism (Good), b) immunity factors in infection of cells by viruses (Dulbecco), c) the metabolic view of parasitism (Dubos), and d) with mechanisms and molecular bases of the struggle between host and parasite (Sevag). Prefatory discussions by C. M. Pomerat, included in the book, serve to orient the reader to the tenor of the conference.

The value of the book is increased by inclusion of extensive bibloigraphies, including titles. Transcripts of the conference purposely were edited minimally to preserve the flavor of the discussion; as a result, the text is marred by typographical errors. The non-specialized reader will enjoy the record for its summary of information, and for its review of the modern concept of cellular disease, but mostly perhaps, for its revelation of the personalities and modes of thought of noted students of the infectious process. The book will interest specialized readers for obvious reasons; it is recommended particularly to cell culturists for the plates illustrating various types of virus-induced cytopathogenic effect, which have not been published elsewhere.

JOHN D. ROSS

Annual Review of Microbiology, Volume 11, C. E. Clifton, Editor, Palo Alto: Annual Reviews, Inc., 1957, 536 pp., $7.00.

As was true with earlier editions of *Annual Reviews*, the reader of this one is bound to find something to whet his interest. All of the reviews cover the literature through 1956 and some extend into early 1957.

Contributions to virus interests, both animal and plant, are most numerous in the volume (Variations in Animal Viruses by M. Edney; Some Problems in Plant Virus Studies by K. M. Smith; Serological Identification of Plant Viruses and Serological Diagnosis of Virus Diseases of Plants by E. van Slogteren and D. H. M. van Slogteren; Chemotherapy of Viral and Rickettsial Diseases by F. L. Horsfall, Jr., and I. Tamm; and Use of Tissue Cultures in Virus Research by J. D. Ross

and J. T. Syverton). Microbial geneticists will be interested in Genetics of the Protozoa by J. R. Preer, Jr. and Bacterial Genetics by L. L. Cavalli-Sforza. Reviews with appeal to environmental microbiologists include Soil Microbiology by H. G. Thornton and J. Meiklejohn, Oral Microbiology by H. Hoffman, and Prediction of Plant Disease Epidemics by P. R. Miller and M. J. O'Brien. Microbial Diseases of Insects are discussed by E. A. Steinhaus, while M. R. Raghavendra Rao considers the Acetic Acid Bacteria. Major aspects of Microbial Metabolism are covered in Metabolism of Carbohydrates and Related Compounds by W. A. Wood, and Nitrogen Metabolism by E. F. Gale and K. McQuillen.

Of special current interest is P. Grabar's Review of the Microbiological and Immunological Literature Published in 1956 in the U.S.S.R. Other subjects are: Finer Morphology of Microorganisms by E. Faure-Fremiet, Colicins by P. Fredericq, Nongenetic Effects of Radiations on Microorganisms by R. F. Kimball, Nutrition of Bacteria and Fungi by B. Magasanik, Antibiodies Against Enzymes by B. Cinader, and The Homograft Reaction by G. D. Snell.

Advances in Enzymology, Volume XIX, F. F. Nord, Editor, New York: Interscience Publishers, Inc., 1957, 457 pp., $9.85.

The nineteenth volume of "Advances in Enzymology" is similar to its predecessors in that recent developments are reviewed and discussed by people active in and familiar with specific areas of the field of enzymology. The first review in this issue is by W. Vishniac, B. L. Horecker, and S. Ochoa and covers Enzymic Aspects of Photosynthesis. The authors succeed in their stated purpose of reviewing the enzymic reactions concerned with CO_2 fixation and carbohydrate metabolism in plants and relating them to less well known aspects of photosynthesis. Information about these processes as they occur in bacteria is included where it seems applicable. This review emphasizes information on the functions of green leaves and algal thalli. H. S. Mason has an exhaustive review on Mechanisms of Oxygen Metabolism (842 references). He develops the idea that molecular oxygen is metabolized by three types of enzymes: oxygen transferases, mixed function oxidases and electron transfer oxidases. Mason defines an "oxidase" as an enzyme that catalyzes reactions of molecular oxygen. Specific enzymes are discussed in detail under each of the three major groups. T. Wieland and G. Phleiderer have summarized work done on Activation of Amino Acids (in German). This review includes a discussion of syntheses and reactions of activated amino acids, the role of ATP in amino acid activation and reactions of activated amino acids in biological systems. These authors have presented useful background material on the chemistry of activated amino acids which helps in evaluating the role of these compounds in biological systems. The Properties of Papain by J. R. Kimmel and Emil L. Smith is devoted largely to the crystalline enzyme and the authors describe its physical, chemical and enzymic properties. The authors point out that the view that proteolytic enzymes are solely hydrolytic must be revised; it is necessary to consider the observations that these enzymes can also catalyze synthetic and transfer reactions. The Principal Pathways of Assimilation and Dissimilation of Nitrogen in Animals (in French) as covered by A. E. Braunstein deals primarily with vertebrate animals, and in particular, with mammals. The significance of transamination is discussed in its relationship to synthesis of amino acids in animal tissue and pathways of conversion of protein nitrogen to urea. At the end of the review the author summarizes much of the information by presenting his conception of the principal pathways of nitrogen metabolism in mammals.

All the subjects covered need not be of equal significance to the reader whose interests lie in the field of microbiology; however, reviews of this types are instrumental in keeping him abreast of developments outside his immediate areas of interest. This volume, as the others in the series, is an excellent source of concisely stated information and of references to the literature on the particular subjects covered.

H. W. WALKER

Biochemistry of Some Peptide and Steroid Antibiotics, E. P. Abraham, New York: John Wiley and Sons, Inc., 96 pp., $3.00.

The current volume comprises the 1957 CIBA Lectures in Microbial Biochemistry presented at the Institute of Microbiology, Rutgers University. The first portion of the book deals with the biochemistry of the bacitracin family of antibiotics with major emphasis on bacitracin A, wherein most of the interesting structural details have been elaborated.

The chronological development of research on the cephalosporins is presented in Chapter 2. Structural work on cephalosporin N (D-4-amino-4-carboxy-n-butyl penicillin) added a new member to this well known family. Two additional carbon and oxygen atoms beyond those normally occurring in the B-lactam-thiazolidine ring have yet to be placed before the structure of cephalosporin C is complete. In the reviewer's opinion, it was unfortunate that the term cephalosporin was originally applied to the P series since we now know them to be chemically unrelated to the other cephalosporins.

In the final chapter the structural relationships of cephalosporin P_1, helvolic acid and related steroids synthesized by fungi are discussed. Un-

usual ring structures in the bacitracins are compared with those of micrococcin. The author shows how the bacitracins and cephalosporins appear to have biogenetic relationships with antibiotics from quite different sources. Undoubtedly our knowledge with respect to peptide and nucleic acid synthesis will be enriched as more is learned about the biochemical disturbances which these antibiotics bring about.

R. G. BENEDICT

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For August, 1958, issue—June 20, 1958

For November, 1958, issue—September 10, 1958

For January, 1959, issue—November 1, 1958

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1958—Chicago, April 27–May 1

1959—St. Louis, May 10–15

1960—Philadelphia, May 1–5

1961—Chicago, April 23–27

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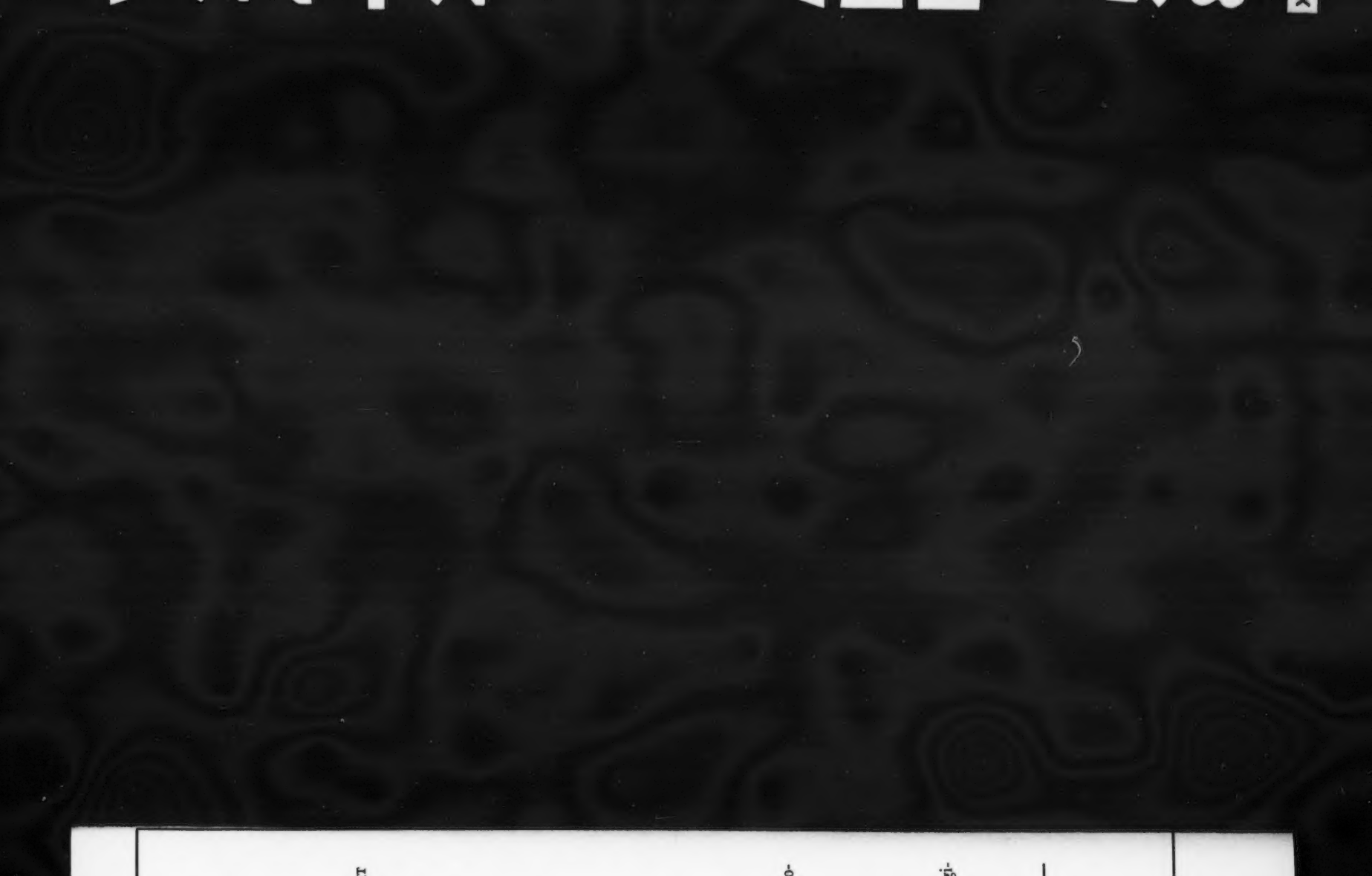
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